PUBLIC AND PRIVATE SECTOR NEGOTIATIONS, COMPARING NEGOTIATORS AND CONTEXTS

Robin Bouwman

This work was (partly) financed by the Netherlands Organization for Scientific Research (NWO), Research Talent Grant 403-13-021.

Printed by: Ipskamp drukkers, Enschede
Design by: Bregje Jaspers, ProefschriftOntwerp.nl

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Proefschrift

ter verkrijging van de graad van doctor
aan de Radboud Universiteit Nijmegen
op gezag van de rector magnificus prof. dr. J.H.J.M. van Krieken,
volgens besluit van het college van decanen
in het openbaar te verdedigen op

vrijdag 7 juni 2019

om 12:30 uur precies

door

Robin Bosco Bouwman

geboren op 7 augustus 1985

te Purmerend

Promotoren

Prof. dr. S. van Thiel
Prof. dr. A.M.A. van Deemen
Prof. dr. E.A.J.A. Rouwette

Manuscriptcommissie

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Prof. dr. G. van Ryzin (Rutgers University, New York, US)
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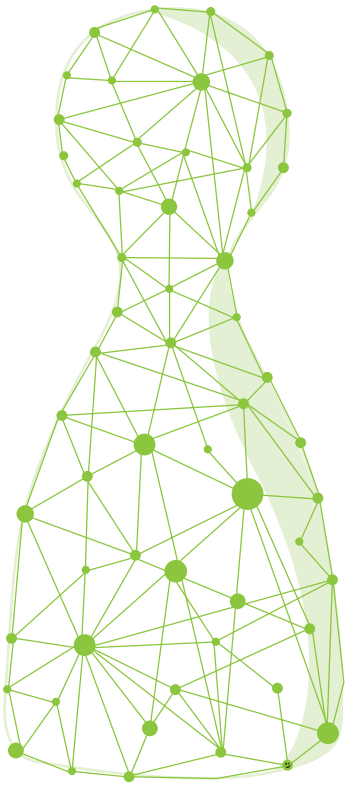
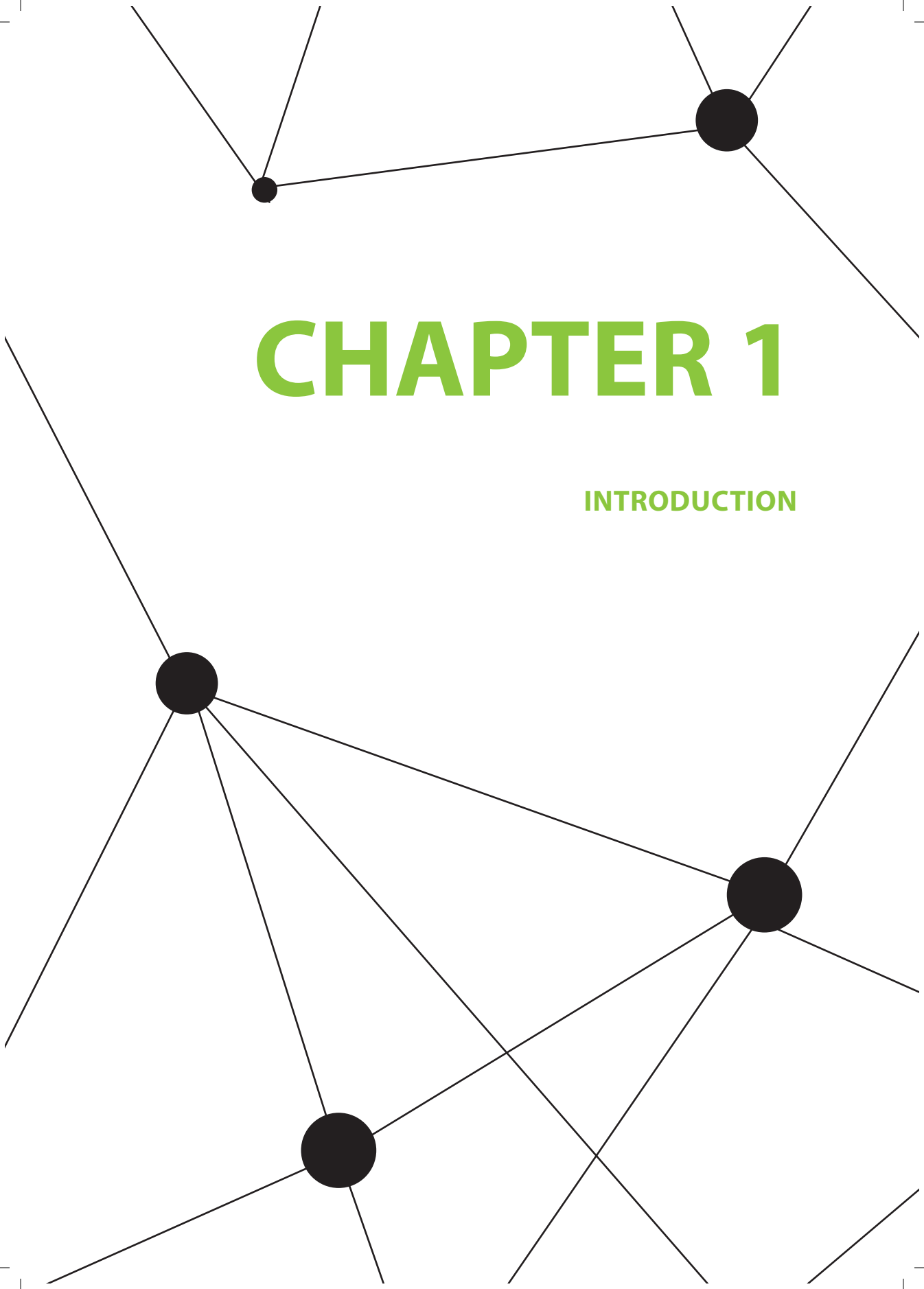




CHAPTER 1

INTRODUCTION

INTRODUCTION

Negotiation dynamics are ubiquitous in the public and in the private sector. For example, the European Union has expanded several times by adding new member states over its history. Prospective member states need to comply to a set of criteria called the Copenhagen criteria to be eligible (European Commission, 2012). Currently, candidates such as Montenegro and Serbia negotiate with the EU enlargement commissioner over terms and conditions for integration. Similarly, the British Government tries to negotiate its withdrawal from the European Union.

In 2012, the Dutch universities negotiated performance agreements with the ministry of Education and Culture. This agreement involved university level budgets based on university performance (VSNU, 2011). Similarly, the Dutch railways, negotiate annually with the ministry of Infrastructure and Water Management about the timeliness of trains, capacity, travel information and Wi-Fi connectivity in trains (Rijksoverheid, 2015a).

In 2015, a large decentralization shifted the responsibility for youth care, elderly care and mental healthcare from the Dutch central government to municipalities (Rijksoverheid, 2015b). Typically, municipalities must now coordinate the procurement of healthcare, prizes, terms and conditions as well as the actual realization of these 'new' duties. This decentralization has led to an increase of negotiations with health insurers, care providers and health professionals.

These three examples show that negotiations are an important part of work in the public sector and that they are carried out by politicians and public servants at the supranational, national and local level. On top of this, many governmental tasks require coordination between actors on more than one level. For instance, one of the results of the Paris-climate agreement is that many governments pave the way for windfarms to generate electricity. A successful implementation of a windfarm requires municipalities, provinces, multiple national governments, energy companies and contractors to agree on a common goal and to work together. The examples above show that negotiations and the outcomes of negotiations have the potential to have great societal impact.

Negotiations have primarily been studied in the private sector as a tool for arriving at binding and non-binding decisions. For example, scholars have investigated cooperation and competition (Brandenburger & Nalebuff, 2011), the role negotiations play in price agreements, information sharing for terms and delivery dates (eg. Scholes, Wright, Westhead, Burrows, & Bruining, 2007) and joint problem solving within and between organizations (eg. Aarikka-Stenroos & Jaakkola, 2012; Graham, 1986).

However, as the examples above illustrate, negotiations are also relevant in the public sector context. Public servants negotiate with other servants over practical implementation of policies and with civil society or citizens' representatives to co-produce (Bovaird, 2007; Fountain, 2001). In the European Union, negotiations take place between local and national or supranational actors in policy implementation and in international relations (Tallberg,

2006). Moreover, cross-sectoral negotiations take place in public-private-partnerships (Klijn, Koppenjan, & Termeer, 1995).

Furthermore, New Public Management (NPM) brought private-sector management reforms in the public sector, leading to the increased use of performance agreements, concessions and contracts with quasi-autonomous agencies, between levels of government and state-owned companies (Dunleavy & Hood, 1994). These NPM reforms have increased the number, scope and relevance of negotiations in the public sector and between the public and private sector (Hood, 1995).

Despite the fact that that negotiations are a day-to-day activity for many public servants, and that negotiation outcomes often have practical and societal impacts, the academic literature has paid relatively little attention to negotiation behavior and negotiation outcomes of public servants. A systematic literature review in public administration and public management journals, found 104 papers are found that have negotiation* or bargain* in the title or keywords. Other inclusion criteria are that the articles are ISI-rated, are published between 1988 and 2018 (30-years), are published in a top-15 journal, are peer-reviewed and written in the English language (See appendix 1). The majority of these papers deal with policy negotiations in the realm of the European union, collective bargaining and so-called public service bargains (PSBs), which are not explicit negotiations but rather implicit and explicit agreements between politicians and servants over their duties and tasks (Hood & Lodge, 2006). Most articles are of a qualitative nature and focus on institutional negotiating actors rather than individual negotiators.

From this body of research, only two articles specifically focus on bureaucrats as the unit of analysis (Burton, 1990; Johansson, 2012). The paper by Burton (1990) is theoretical and describes potential ethical factors that may play a role in cross-sectoral negotiations. The Johansson paper (2012) is an exploratory case-study of how frontline workers negotiate with bureaucrats and policymakers. Some studies that focus on other topics such as policy networks or public-private-partnerships mention negotiation as a self-evident part of a collaborative process in for instance network literatures (Agranoff & McGuire, 2001; Kickert, Klijn, & Koppenjan, 1997). This perspective predominantly projects organizations as monolithic actors, while individual employees engage in the actual negotiating (Rhodes, 2000). Because individuals negotiate, micro-level behavioral insights from the psychological and economical literature are relevant.

These literatures, however, often focus on the private sector, while public administration literature has shown that public and private sector organizations and employees are different in context, motives and attitudes (Bozeman & Bretschneider, 1994; Rainey & Bozeman, 2000b). For example, private organizations focus on continuity and making a profit, while public organizations pursue collective, societal goals (Rainey, 2009). Employees in the public and private sector also differ on individual characteristics such as the motivation to contribute to a public good (Perry & Wise, 1990; Vandenabeele, 2008), altruism (Delfgaauw & Dur, 2010), risk

propensity (Buurman, Delfgaauw, Dur, & Van den Bossche, 2012; Pfeifer, 2011) or reported risk preferences (Tepe & Prokop, 2018) and values (Van der Wal, De Graaf, & Lasthuizen, 2008).

Summing up, negotiations are highly relevant in both the private and the public sector for arriving at binding and non-binding decisions. Typically, negotiation knowledge is based on the private sector. Negotiation literature does not distinguish between the public and private sector and its respective employees. Public administration literature acknowledges these sectoral differences but tends to focus on institutional actors instead of individual negotiators, thereby ignoring behavioral aspects of negotiation. This means that the extent to which public and private sector context and differences between individual negotiators from those sectors matter for negotiation processes and outcomes is not well understood up to date.

This dissertation focuses on the question whether specific characteristics of public sector employees, as well as specific characteristics of the public sector context, cause different negotiation processes and outcomes compared to characteristics of private sector employees and private sector context. It is my aim to understand if, and under which conditions sectoral and individual differences exert an influence on negotiation and negotiation outcomes.

In the next sections of this chapter, I define negotiations and discuss research on negotiations. Following this, the differences between the public and private sector contexts and public and private sector employees are discussed. The main research question and the sub questions that guide this dissertation are presented in the final sections of this chapter. This section is concluded with the methodological and practical contributions as well as an outline of this dissertation.

NEGOTIATION[1]

The negotiation literature can be divided in two main traditions of research. The first tradition builds on the social psychological literature. This research tradition focuses on perceptions, cognition, emotions and relations in negotiations as well as individual differences between negotiators, such as gender and personal abilities (cf. Fulmer & Barry, 2004; Lewicki, Saunders, & Barry, 2015; Rubin & Brown, 1975). While the majority of this tradition is descriptive, part of this literature is of a prescriptive nature and deals with questions like how to avoid conflict escalation and dealing with impasses in negotiations (Fisher & Ury, 1981; eg. Raiffa, Richardson, & Metcalfe, 2002, p. 8).

The economic tradition focuses on the individual negotiator or group of negotiators from a decision analysis or game theoretical perspective (Raiffa et al., 2002). In this tradition, negotiators are individual decision makers, concerned with maximizing utility (Raiffa et al., 2002). This research tradition studies negotiation topics such as fairness in outcomes (Buelens

1 Parts of this section are based on Bouwman (2018) with permission from the publisher.

& Poucke, 2004; Fehr & Gächter, 2000a), symmetric and asymmetric information positions, solutions and core concepts as well as anchors and biases in decision-making (Kahneman, Knetsch, & Thaler, 2008). Moreover, there is a large stream of research that focuses on contributing to and taking from public goods. This work has also made its way into the field of political science (see for example Ostrom, 2000). Experiments usually show that individuals voluntarily contribute more than theory would predict, they have a so called 'warm glow' (Andreoni, 1995; Khadjavi & Lange, 2015). From this perspective, negotiation is a form of joint decision making which can be modelled once utilities and payoff functions are known or assumed. In this dissertation, literature from both negotiation approaches are used.

Negotiation is 'the process of back-and-forth communication aimed at reaching agreement with others when some of your interests are shared and some are opposed' (Ury, 1993, p. 4). The term 'negotiator' is used for a person who negotiates, while 'a negotiation' refers to the process of negotiation. In this dissertation, negotiators are considered to be public managers, civil servants and private sector managers or private sector employees.

Negotiations typically have an object such as money, time, public goods, a coalition, or a collection of solutions to a problem. Negotiations occur for three main reasons: 1) people want to agree on how to divide a limited resource such as time or money, 2) people want to create something that no individual could achieve alone and 3) people want to solve a dispute (Lewicki et al., 2015, p. 3). A number of characteristics are present in negotiations, albeit it in varying degrees. Negotiations occur between two or more people. There is conflict of needs and/or desires between the people involved. People have a free choice in whether to negotiate or not. In the process of negotiations, gradual concession-making is expected. Negotiators prefer negotiation over searching for alternatives or fighting (Lewicki et al., 2015; Raiffa et al., 2002).

Central to negotiations is that the people involved are interdependent (Raiffa et al., 2002). They need others to reach their own goals, which distinguishes them from independent people. The extent to which people are dependent from others in negotiations, hinges on the number of alternatives they have. The appeal of potential agreement is evaluated in light of the Best Alternative To a Negotiated Agreement, 'BATNA' and in light of the Worst Alternative To a Negotiated Agreement 'WATNA' (Fisher, Ury, & Patton, 1999).

The interdependency of negotiators is strongly influenced by the negotiation structure (Lewicki et al., 2015). A first negotiation structure is distributive negotiations. Distributive negotiations are the setting where the accomplishment of one negotiators' goals, blocks the goals of other negotiators (Carmichael, 2005; Raiffa, 1982). Distributive negotiations most frequently deal with scarce assets such as time, money or territory. This negotiation structure is referred to as constant sum or zero-sum negotiation by some authors as the total sum of assets is not variable or not under the influence of the negotiators (Raiffa et al., 2002; Von Neumann & Morgenstern, 2007).

A second structure is integrative negotiations. Here, negotiators are able to achieve their individual goals, while other negotiators also achieve theirs (Carnevale & Pruitt, 1992; Fisher et al., 1999; Raiffa et al., 2002). These are referred to as variable sum, as the total size of the assets is not fixed a priori (Raiffa et al., 2002). The size of the assets is negotiated over when negotiators share information about their goals, interests and intentions, thereby exploring shared interests. Formulating public policies, and joint problem solving are examples of integrative negotiations.

Negotiations produce a range of outcomes that can be tangible or intangible. Examples of tangible outcomes are agreements or contracts, coalitions and even impasses (Saorín-Iborra & Carmen, 2006). In the public sector, these outcomes can also be budgets, agreed policies, price points or concessions. Intangible outcomes are for instance the felt need to win or have the upper hand in negotiations (Malhotra, Ku, & Murnighan, 2008) or to keep a good reputation for constituents or opponents (Tinsley, O'Connor, & Sullivan, 2002).

THE PUBLIC AND PRIVATE SECTOR CONTEXT

The public and private sector are traditionally thought to be different from one another (Rainey, 2009; Rainey & Bozeman, 2000b, See for a discussion Allison, 1983). This distinction applies to contexts, organizations, and employees. In discerning the public from the private sector, there are two theoretical approaches, the core approach and the dimensional approach (Antonsen & Jørgensen, 1997; Bozeman & Bretschneider, 1994).

From the perspective of the core approach, organizations are assumed to be either public or private, based on legal ownership. Public organizations are owned by the collective, such as citizens and taxpayers, while private organizations are owned by one owner or a group of shareholders. Also, public organizations are publicly funded through taxes, while private sector organizations have a limited set of funders, like private equity or shareholders. Besides legal ownership, other dimensions have been added. Private organizations pursue for example a limited set of goals such as continuity and making a profit. Public organizations target more diverse goals simultaneously that may be conflicting with the goals of another public organization or can even be conflicting internally (Rainey & Bozeman, 2000b). Public organizations aim to create public goods and services, while private sector organizations are able to exclude individuals from their goods and services.

Public organizations are also increasingly held to higher standards for transparency and accountability (Bovens, Schillemans, & 't Hart, 2008; Power, 1994). Private sector organizations are accountable in terms of a 'bottom line', while accountability in the public sector is more demanding and refers to processes and policy in general (Mulgan, 2000b). Additionally, public servants weigh potential political consequences as their political superior will be

held accountable. Under unfavorable political circumstances, public servants remain out of 'shooting range', while politicians take the blame of failed negotiations (Hood, 2010).

The core public-private distinction has been criticized by some for being overly simplistic and being of a solely descriptive nature (Bozeman, 2004; Rainey, 2009). Others have pointed out that any distinction between public and private is problematic as it mixes up empirical findings and normative statements about what public and private ought to be (Noordegraaf & Abma, 2003; van der Wal, 2008). Moreover, the boundaries between sectors are increasingly fuzzy as public sector organizations have adopted private sector characteristics and practices (Hood, 1991) and private organizations have adopted corporate social responsibility (CSR) practices (Lins, Servaes, & Tamayo, 2017).

The second perspective is the dimensional approach, which considers the distinction between public and private sector as gradual and a matter of authority on two dimensions: political authority and economic authority. From this perspective, all organizations are public to a certain degree, depending on the mix of political and economic authority (Bozeman, 2004; Bozeman & Bretschneider, 1994). As a result, all organizations can be positioned along the two dimensions. Commercial companies, quasi-autonomous agencies (cf. Thiel & Yesilkagit, 2014), Non-Governmental Organizations (NGO's), State Owned Enterprises (SOE's) and (local) governments can all be positioned relative to one another. A downside to applying the dimensional approach is that a precise classification of organizations is complicated and relative to all others (Moulton, 2009).

In this dissertation, I primarily use the archetypical 'core' approach in studying public- and private sector differences. Put differently, I focus on the variance between sectors, rather than for example the variance within sectors for studying negotiation outcomes and behavior. As negotiation differences between the sectors are mostly uncharted territory up to date, the core approach is more instrumental. For example, I use business administration and public administration students as participants in the experiments in Chapters 2, 4 and 5. These students are enrolled in curricula that focus on working in either the private or the public sector organizations. Similarly, the practitioners in Chapter 6 are employed by a public or a private sector organization.

The only exception is the study in Chapter 3, which is based on the dimensional approach. The main rationale for this choice is that this study focuses on differences in negotiator discretion in the public and private sector and the effects thereof on negotiation outcomes. In the core approach, discretion or even autonomy of public and private sector employees is not emphasized, while the perspective of the dimensional approach stresses that discretion of organizations and thus discretion of employees will vary on the dimensions of political and economic authority (Bozeman, 2004).

INDIVIDUAL DIFFERENCES

Interestingly, both the core approach and the dimensional approach focus primarily on organizations as entities while negotiations are carried out by individuals. Not organizations, but individuals negotiate on behalf of their organization. Individual characteristics such as conflict style (Shell, 1974), negotiation self-efficacy (Gist, Stevens, & Bavetta, 1991) and gender (Leibbrandt & List, 2014) are proven to be reliable predictors of negotiation behavior. Individual public servants and private sector employees are proven to be dissimilar in values, attitudes and preferences (Baarspul & Wilderom, 2011; Delfgaauw & Dur, 2010; Esteve, van Witteloostuijn, & Boyne, 2015; Perry, 1996; Rainey, 1982; Tepe, 2016; Van der Wal et al., 2008; Van Witteloostuijn, Esteve, & Boyne, 2017).

Public servants work on behalf of others such as politicians, citizens and society as a whole. In principle, they aim to act in the public interest (Van Witteloostuijn et al., 2017; Wise, 2000). If acting in the public interest is defined as saving taxpayers' money, we would expect negotiating public servants to adopt negotiation strategies that will show this frugality for example by making smaller proposals. If the public interest is defined broader, as all activities that contribute to the public good, maintaining good relations between organizations and public service providers, job creation and economic stability, we would expect public negotiators to display more cooperative and accommodating negotiation strategies.

The differences in motives between public and private sector employees are well documented, and are better known as public service motivation (PSM). Public service motivation is a set of beliefs, values and attitudes that 'go beyond self-interest and organizational interest, that concern the interest of a larger political entity and which induces through public interaction motivation for targeted action' (Vandenabeele, 2007, p. 547). Compared to private sector employees, public servants have a stronger interest in politics, are more willing to contribute to the public good and score higher on scales that measure self-sacrifice and compassion (Perry, 1996; Vandenabeele, 2007). Public sector employees are also more interested in rewards that appeal to them intrinsically (Bullock, Stritch, & Rainey, 2015; Houston, 2011). Moreover, public servants report to be more risk averse (Wildavsky & Dake, 1990), are more likely to whistle blow (Brewer & Selden, 1998), are more likely to collaborate in situations that demand competition (Esteve et al., 2015), and adhere stronger to organizational values such as lawfulness, accountability and incorruptibility (Van der Wal et al., 2008). These are all individual characteristics that will impact negotiation process and outcomes. For example, the tendency to contribute to a public good based on intrinsic motivation will influence the process of giving and taking that is central to negotiations. Similarly, taking risk by exposing your intentions in negotiations could be used as strategy (Galinsky, Mussweiler, & Medvec, 2002).

It is not clear if and how public-sector characteristics cause variations in negotiation processes and outcomes. Also unclear is if and how public servants and private sector negotiators behave differently in otherwise similar negotiation settings caused by their differences in motives, values and traits.

MAIN RESEARCH QUESTION AND SUB QUESTIONS

In this dissertation, I test hypotheses on these topics by carrying out a series of experiments, in the laboratory, and in classroom settings. By doing so, I address the main research question of this dissertation:

What are the differences between public and private sector negotiations in terms of sector context, negotiation behavior and negotiation outcomes?

The main research question in this dissertation is divided in five separate research questions. These questions are structured from the individual micro-level of behavior, to the meso-level of strategic negotiation settings, to the macro-level of the public and private sector contexts (see table 1).

Table 1: Overview and research questions in this dissertation.

Chapter		Research question	Publication status
1	Introduction	What are the differences between public and private sector negotiations in terms of sector context, negotiation behavior and negotiation outcomes?	Dissertation chapter
2		Do people with high public service motivation behave more cooperatively than people with low public service motivation in repeated negotiations?	Published in Public Performance and Management Review
3		Do variations in negotiator discretion lead to different outcomes for public versus private sector employees?	Submitted Journal of Management
4		Does public accountability lead to different coalitions and lower negotiator performance in coalition negotiations?	Published in Public Administration Review
5		Are responses to accountability different for public versus private sector negotiators?	Revise & resubmit International Public Management Journal
6		Can the findings from student-based negotiation experiments be replicated with practitioners?	Submitted to Journal of Policy Analysis and Management
7	Conclusion	What are the differences between public and private sector negotiations in terms of sector context, negotiation behavior and negotiation outcomes?	Dissertation chapter

Note that this dissertation consists of a series of papers that are published or are to be published in international peer-reviewed journals. Consequently, the chapters can be read independently, and some theoretical arguments are repeated throughout. All empirical chapters have been presented at national or international conferences.

In the second chapter, I start with studying the individual level differences between individual negotiators oriented towards the private sector, and those oriented towards the public sector.

The research question in Chapter 2 asks: *Do people with high public service motivation behave more cooperatively than people with low public service motivation in repeated negotiations?* Compared to private sector employees, public sector employees are known to score high on the public service motivation (PSM) scale. PSM is a set of beliefs, values and attitudes that 'go beyond self-interest and organizational interest, that concern the interest of a larger political entity and which induces through public interaction motivation for targeted action' (Vandenabeele, 2007, p. 547). This scale measures the degree to which individuals 1) are willing to contribute to a public good, 2) have an interest in politics and policymaking, 3) are likely to self-sacrifice and 4) have high levels of compassion (Vandenabeele, 2008). Because public servants feel a strong need to contribute to a public good, and because they are likely to self-sacrifice, the consequences are not trivial. High PSM-individuals have for example been associated with higher odds of whistleblowing. Whistleblowing is thought to be in the interest of the collective but can have severe negative consequences for those who whistle blow (Brewer & Selden, 1998).

Recent findings support the idea that individuals with high PSM are more likely to behave more pro-social (Esteve, Urbig, van Witteloostuijn, & Boyne, 2016). Based on this, we expect that high-PSM individuals will also display cooperative behavior in a negotiation setting. We especially focus on repeated negotiations as many negotiations in practice are repeated through time. Moreover, many negotiation studies focus on one shot decisions. Additionally, many negotiations are carried out across sectoral boundaries. For instance, in Public Private Partnerships (PPS), negotiators from the public and private sector pursue their goals together by negotiating. Because negotiations across sectoral boundaries will consists of high and low-PSM individuals, we test if the cooperation in repeated negotiations is conditional on the PSM level of the opponent.

The research question in Chapter 3 asks: *Do variations in negotiator discretion lead to different outcomes for public versus private sector employees?* This chapter focuses on individual behavior and the effect of discretion. Negotiator discretion is thought to be influenced by differences between the public and private sector.

The discretion of negotiators will vary from setting to setting and depends on the negotiation setting, such as the number of the available options (Fisher et al., 1999). Discretion of employees as well as discretion of teams of employees is said to positively influence their performance and extra-role behaviors on the job (Gellatly & Irving, 2001; Leach, Wall,

Rogelberg, & Jackson, 2005). From the perspective of the dimensional approach, public organizations experience more political interference and have less financial discretion (Bozeman, 2004). Consequently, public managers are thought to have less discretion than managers in the private sector (Van Wart, 2003). Game theory on the other hand, predicts that the solution to a negotiation problem does not change with varying levels of discretion. These two opposing theoretical hypotheses are tested in a variable sum negotiation game in the laboratory. We test if variations in discretion indeed causes differences in negotiation outcomes, and secondly, if public and private sector negotiators respond differently to the changes in discretion as the public sector is thought to have more rules and regulations, resulting in lower levels of discretion for public sector employees.

The research question in Chapter 4 asks: *Does public accountability lead to different coalitions and lower negotiator performance in coalition negotiations?* Public organizations are held publicly accountable for their procedures and performance. In this chapter, accountability is seen as an element of the public sector context. Accountability is claimed to have an impact on thoughts, feelings and actions (Lerner & Tetlock, 1999). For example, accountability is said to reduce corruption in the public sector (Bovens et al., 2008). Moreover, it is thought to have a positive impact on organizational performance and increases citizen trust in organizations (Ibid). It is unclear whether the performative effect also applies to negotiations, especially when the negotiation outcomes are a coalition. This is a non-trivial issue as many negotiation settings in both the public and private settings result in coalitions. Examples of these coalitions are subgroups of individuals or organizations that work together in networks that aim to solve problems or engage in policy-making (Klijn & Koppenjan, 2000). In this study we test if public accountability leads to lower performance and if accountability also affects the inclusion of parties into a coalition.

The research question in Chapter 5 asks: *Are responses to accountability different for public versus private sector negotiators?* This study extends the work from Chapter 4, by carrying out a cross-sample comparison of public and private sector negotiators. Compared to private sector employees, public servants rate public accountability as the most important value, while private sector employees appreciate profitability more (Van der Wal et al., 2008, p. 474). Because public servants find public accountability a more important value, the effect of accountability on negotiation outcomes will be different for negotiators who are oriented towards the public or private sector. In other words, the effect of accountability on negotiation outcomes is expected to be stronger for public sector negotiators in comparison to private sector negotiators.

The fifth study, in Chapter 6, replicates the negotiation experiments from Chapter 2 and 4 with a lab-in-the-field setup. The main question that guides this chapter is: *Can the findings from student-based negotiation experiments be replicated with practitioners?* This replication has two aims. Firstly, it answers the question whether practitioners behave similarly in negotiation settings compared to students. It is often argued that practitioners have more experience, are socialized in the workplace

and have more diverse background characteristics compared to students. Consequently, experimental results based on student subjects are not representative for practitioners.

Secondly, comparing the behavior of students with professionals in a laboratory contributes to a long-standing methodological discussion on the validity of using students as lab participants. The experiments in Chapter 2 to 5 make use of students as experimental participants. Students are not always considered to be representative for a target population such as negotiators from the public and private sector (Falk & Heckman, 2009). However, students do provide a homogenous statistical sample, are for example relatively young, and highly educated. Practitioners are often socialized in the workplace and more diverse in terms of age and education. In negotiation studies, age has been shown to correlate with negotiator efficacy and with the reduced tendency to behave unethical in some studies (eg. Robinson, Lewicki, & Donahue, 2000). In order to validate if, and to what extent age, education and experience biases the results in the empirical studies based on students, we make use of a lab-in-the-field setup and a sample of practitioners from the private sector and from the public sector to (re)test the hypotheses.

Chapter 7 is the final chapter and provides an answer to the main research question of this dissertation. Again, this chapter focuses on the individual negotiator level, the negotiation setting and the differences in negotiation contexts. I will also discuss the theoretical and methodological contributions of the five studies. Additionally, I will reflect on the limitations of the studies and provide suggestions for future research. This chapter concludes with some implications for practice.

METHODOLOGICAL RELEVANCE[2]

This dissertation consists of a series of experiments, ranging from laboratory experiments, laboratory-in-the-field experiments, to face-to-face classroom experiments. Experiments enable researchers to test theory. There are three main reasons why experiments are most suited to answer the research questions in this dissertation.

Firstly, experimental designs are particularly useful in identifying causal mechanisms by isolating causes and effects. The main reason why experiments are suited to answer questions of causality is that they are a solution to the issue of endogeneity from which much social science research suffers (Angrist & Pischke, 2008; Bouwman & Grimmelikhuijsen, 2016; Morton & Williams, 2010). For precisely this reason, leading scholars have repeatedly called for more experimentation in public administration (Bozeman & Scott, 1992; Margetts, 2011). Although experiments have been a mainstream method in many fields of science, until recently, public administration did not belong to those fields (Bouwman & Grimmelikhuijsen, 2016; Li & Van Ryzin, 2017).

2 This section is based on Bouwman and Grimmelikhuijsen, (2016), with permission from the publisher.

As I use a combination of laboratory experiments, lab-in-the-field experiments and face-to-face experiments, I systematically balance the amount of experimental control, internal validity, external validity and realism. This approach has been called for as it creates a more robust body of evidence by minimizing potential common method bias (Margetts, 2011; Ostrom, 2007; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Chapters 2, 3 and 6 are based on computerized laboratory experiments. Laboratory experiments offer the advantage of more experimental control compared to other experimental types such as field experiments (Morton & Williams, 2010). Because the subjects cannot see their opponents in the laboratory, effects of gender (Leibbrandt & List, 2014), stereotypes (Bowles, Babcock, & McGinn, 2005) and liking (Elfenbein, Curhan, Eisenkraft, Shirako, & Baccaro, 2008) on negotiation process and outcomes are absent. A potential drawback of laboratory experiments is the limited level of realism for the participants (Charness & Kuhn, 2011). This critique specifically targets the ecological validity of experiments. Especially, scholars in the field of public administration often mention this point and seem to prefer field or natural experimental designs with higher levels of realism over laboratory experiments (Margetts, 2011, p. 192)

In Chapters 4 and 5, I use a face-to-face negotiating experiment to study the effect of accountability on coalition negotiations. In this experiment, the participants negotiate in a classroom instead of a laboratory, which is more realistic in terms of negotiation dynamics and setting. They also negotiate a coalition, which is arguably more realistic than a more abstracted public goods game as used in Chapters 2 and 6. By taking this approach, I aim for high internal validity at the cost of external validity and generalizability.

Secondly, I focus on the micro-level perspective of individual behavior in this dissertation. Experimental designs are suited to study individual behavior with great precision (Morton & Williams, 2010, p. 320). This is possible because experiments enable viewing the world in two states (Druckman, 2011). In one state of the world, there is an intervention administered, while in the other, it is absent. This way, it solves one of the fundamental problems of causal interference as one individual cannot possibly be observed with and without this intervention at the very same moment (Druckman, 2011).

Additionally, methodological considerations must be made based on research aim and question (Van de Walle, 2017). As I aim to answer causal questions in this dissertation, an experimental design is suited best. This choice is made in light of the available alternatives in the methodological 'toolkit'. Focusing on micro-level behavior, and the desire to draw causal inferences, reduces the attractiveness of using alternative methods, such as quantitative surveys that excel in studying attitudes and motives (Groves, Couper, Lepkowski, Singer, & Tourangeau, 2004), as well as more qualitative approaches, such as interviewing. Like experiments, (participatory) observations are also more suited to studying behavior but do for example not have the ability to answer causal questions.

Thirdly, using experiments fits the methodological tradition of negotiations research. In both social psychology and (micro) economics, the use of lab experiments, classroom experiments and field experiments are more common compared to the field of public administration. Moreover, by integrating theoretical insights from social psychology, economics and public administration, I contribute to the upcoming field of behavioral public administration. Behavioral public administration is "the analysis of public administration from the micro level perspective of individual behavior and attitudes by drawing on insights from psychology and related fields" (Grimmelikhuijsen, Jilke, Olsen, & Tummers, 2017, p. 45).

PRACTICAL RELEVANCE

As the examples in the introduction show, negotiations are ubiquitous in the public sector at the local, national and supranational levels of government. Understanding negotiations in the public sector is important as large amounts of public means are involved in negotiations over budgets and policies that impact on daily lives of citizens. There are four main reasons why studying negotiation behavior and negotiation outcomes in the public and private sector are important.

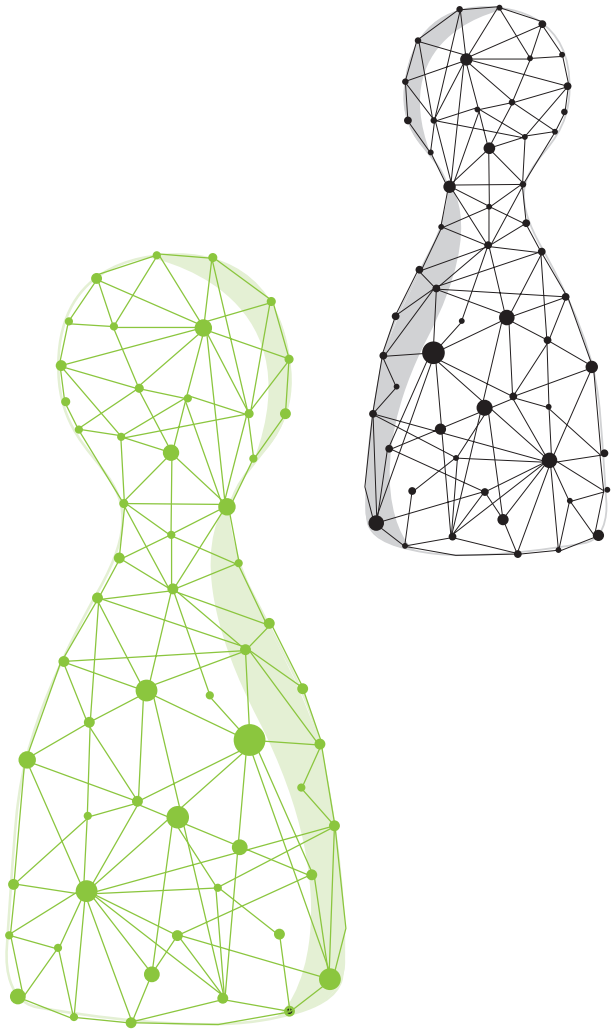
Firstly, public sector organizations are financed through taxes and aim to contribute to the public good. As a consequence, negotiations in the public sector often involve spending public means or the money of taxpayers. Additionally, public sector negotiations deal with agreeing on substantive topics such as infrastructure, social policy and housing or more mundane purchasing decisions. If individual characteristics impact on negotiation behavior and negotiation outcomes, value may be left on the table. Understanding the effects of sectoral context and individual characteristics on negotiation processes and outcomes is important to help preventing mistakes that are potentially very costly.

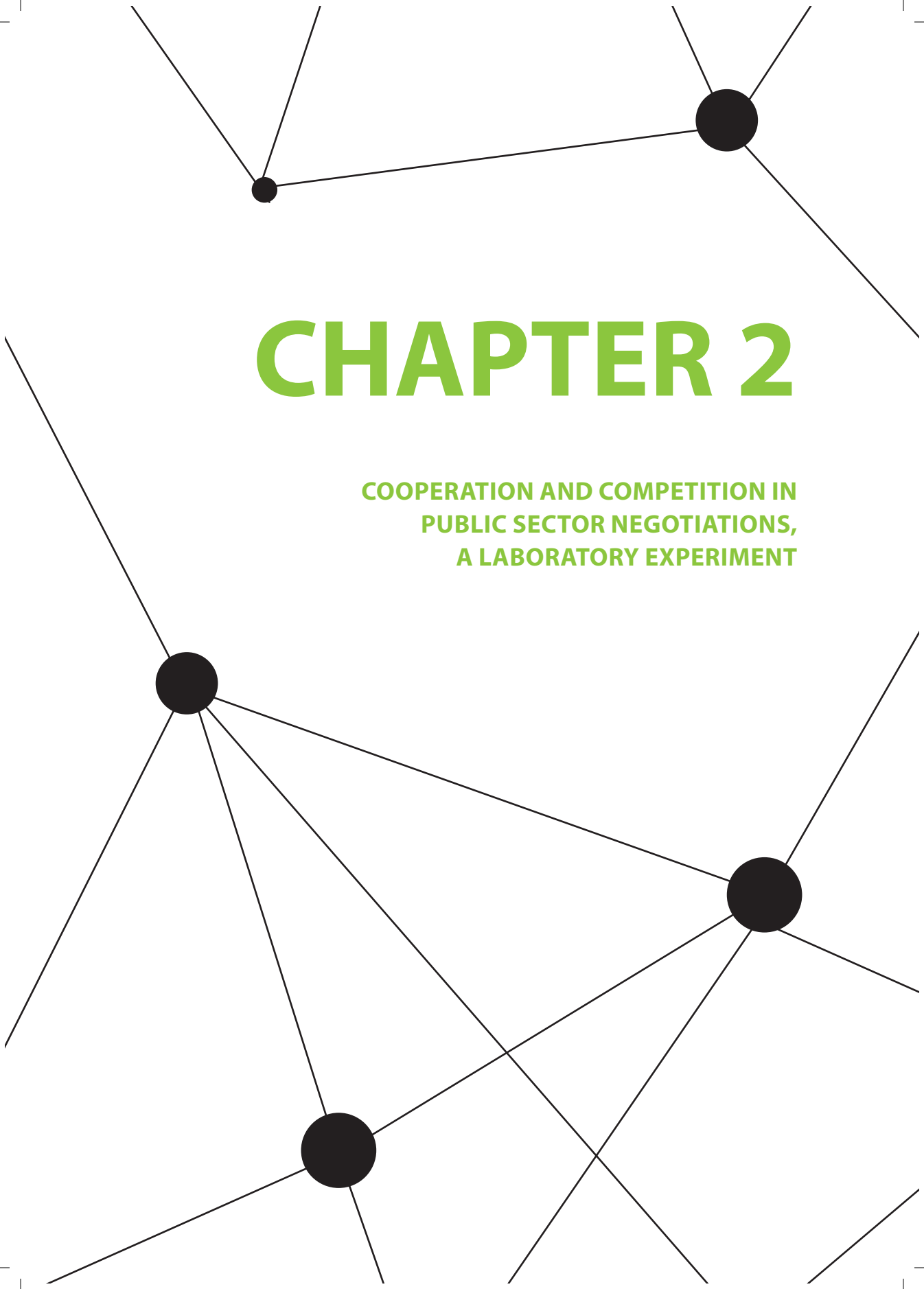
Secondly, in times of financial austerity, such as the most recent financial economic crisis (2007-2011), negotiations are a necessary tool that enable doing more with fewer resources. For example, the financial crisis caused severe risks for the health of vulnerable citizens in the EU (Vandoros, Hessel, Leone, & Avendano, 2013). Some countries, such as Austria, Latvia, Poland and Slovenia, (re)negotiated prices with pharmaceutical companies (Karanikolos et al., 2013). Understanding how public accountability impacts negotiation processes and outcomes helps in understanding for example when and how negotiations can be carried out effectively.

Thirdly, public- and private sector negotiators engage in cross-sectoral negotiations in public-private-partnerships in many infrastructural projects and for example in networks (Koppenjan & Klijn, 2004). Based on the literature, negotiations are carried out in policy networks on a regular basis by actors in networks. This literature stresses the need for good relationships to achieve results, while the question of how to negotiate and what to negotiate

is hardly touched upon. Network theory suggests that public managers need negotiation skills but how these skills can be put to use is somewhat unclear (see for example Bingham, Nabatchi, & O'Leary, 2005). A behavioral understanding of negotiations will open up this black box as negotiations are the central means of communication for reaching binding and nonbinding decisions in public-private-partnerships and in networks (Ibid).

Fourth, many negotiations in the public sector deal with actors from both the public and the private sector. Any differences between negotiators will impact the negotiation outcomes, beyond the influence of negotiators, potentially leading to lowered service delivery or higher prices for end users. For example, many goods and services are acquired by means of public procurement. This process has reduced the negotiations as much as possible in order to create a level playing field for private companies under EU regulations 2004/17/EG and 2004/18/EG. However, as many governmental contracts are fairly long-term and governments remain ultimately responsible for the outcomes, frequent coordination is needed. Making and updating agreements, while maintaining a good relationship across sectoral boundaries requires knowledge of differences between sectors and knowledge of how these difference impact negotiations in practice.





CHAPTER 2

COOPERATION AND COMPETITION IN PUBLIC SECTOR NEGOTIATIONS, A LABORATORY EXPERIMENT

ABSTRACT

Negotiating is a core activity in the public and private sector. Because of varying public service motivation (PSM) between public- and private-sector employees, we expect them to behave differently in negotiations. Moreover, one-shot negotiation settings are often studied even as many real-world negotiations are repeated exchanges. We apply a repeated linear public goods game in a laboratory experiment to test the link between PSM and the level of cooperation by using a sample of graduate and undergraduate students.

The results show that high-PSM participants, indeed, contributed more over the entire experiment, and therefore, acted more cooperatively in a repeated negotiation. Matching negotiators to opponents with high-PSM, low-PSM did not alter the level of cooperation in negotiation. Based on this, we conclude that cooperation in repeated negotiations is not conditional on the PSM of opponents. We conclude with implications for theory and practice.

This chapter has been published as: Bouwman, R., van Thiel, S., van Deemen, A. and Rouwette, E., Cooperation and Competition in Public Sector Negotiations, A laboratory experiment. *Public Performance and Management Review*, DOI: 10.1080/15309576.2018.1553720.

INTRODUCTION

Negotiation is a central activity of employees in both public and private sector organizations. In the public-sector, employees negotiate over scarce resources such as budgets, or coordinate policy problems. Negotiation outcomes are often influenced by individual behavior and negotiator motives such as value orientation and professional norms (Lewicki et al., 2015, p. 452), fairness ideals (Reuben & Riedl, 2013) and gender (Van Vugt & Iredale, 2013).

In the public sector, the rise of New Public Management (NPM) has led to an increase in negotiations by public sector employees such as negotiations between civil servants and politicians (Hood & Lodge, 2006). Other examples are performance agreements, concessions and contracts with quasi-autonomous organizations and stated owned companies (SOE's), outsourcing and tendering. Corporate Social Responsibility practices in the private sector have placed an emphasis on contributing to the public good (Holme & Watts, 1999). Thus, both NPM and CSR have made the public and private sector more alike in terms of practices.

While the public and private sector are becoming increasingly alike, there is empirical evidence that public-sector and private-sector employees are dissimilar in motives (Baarspul & Wilderom, 2011; Esteve et al., 2015), risk propensity (Bozeman & Kingsley, 1998; Wildavsky & Dake, 1990) and in trust (Tepe, 2016). One distinguishing characteristic between public and private sector employees is captured in Public Service Motivation (PSM) (Perry, 1996; Vandenabeele, 2007). PSM consists of four dimensions: interest in politics, contributing to the common good, self-sacrifice and compassion that could directly impact the process of negotiations carried out by public sector employees (Vandenabeele 2007). Although negotiation context matters, we presume that a compassionate negotiator will act more cooperatively under equal contexts, equal circumstances and equal payoffs.

If indeed public-sector employees act more cooperatively in a number of settings, public negotiators may get less 'mileage' out of public means as public sector employees 'give more than they take'. In more complex or multidimensional negotiations, public sector negotiators could be more efficient negotiators by arriving at agreement faster with less friction by focusing on cooperation. Moreover, cooperation could lead to higher joint outcomes that are beneficial for society as a whole. Competitive negotiators on the other hand, are more likely to use bluffing or unethical tactics and they are more likely to lie (Robinson et al., 2000; Ross & Robertson, 2000). On top of that, Steinel and de Dreu (2004) found that cooperative negotiators faced with competitive negotiators overresponded by using even more deceptive tactics. In other words, when public managers represent public organizations their competitive or cooperative behavior may influence the probability of agreement to a large degree which in turn may have societal consequences.

In a recent study using three prisoner dilemma games, Esteve et al. (2015) found that individuals with high PSM scores acted cooperatively, even when they knew this was not in

their personal interest in one of the games. Another study corroborated the results with a three person public goods game (Esteve et al., 2016).

Our study extends the work of Esteve et al. (2016) by focusing on cooperation in a repeated negotiation game. Repeated interactions in negotiation are important as this forces negotiators to act more honestly, more cooperative and negotiators are more concerned about their reputation (Raiffa et al., 2002, p. 90). Many negotiations, in the public- and private sector are repetitive. Repeated negotiations are for example found in service contracting (Ahadzi & Bowles, 2004), in public sector reform and cutback management (Bouckaert, Peters, & Verhoest, 2016), in international diplomacy, EU policy implementation or enlargement negotiations (Brücker, Schröder, & Weise, 2004) and in public private partnerships when private companies and municipalities negotiate practical implementation in infrastructural projects (Osborne, 2000).

Negotiation studies in public management research are scarce, while characteristics of public sector employees are not considered in the negotiation literature. Moreover, repeated negotiations are common in practice but scholars have focused on single shot interactions. In this paper, we aim to fill this gap by focusing on negotiation behavior in a repeated negotiation game. We focus on the differences in à priori motives between public- and private sector employees. For this, we use a sample of graduate and undergraduate students. The main research question of this study is: *Do people with high public service motivation behave more cooperatively than people with low public service motivation in repeated negotiations?*

Our study contributes in two ways to the public management literature. First, we study behavior in a repeated negotiation which differs from single shot interactions that have been studied earlier in relation to cooperative behavior (Esteve et al., 2015). Repeated negotiations are more realistic in terms of expectations for negotiators. The expectation to meet again alters strategies of negotiators and for example trust in opponents (Lewicki et al., 2015).

Secondly, we contribute to the upcoming field of behavioral public administration by using theoretical insights from social psychology and experimental economics in the realm of public servants (Grimmelikhuijsen et al., 2017). Also, we carry out a laboratory experiment, reducing the risk of confounding effects while enabling us to study the causal effect of Public Service Motivation on negotiation behavior and outcomes.

In the coming sections, we discuss negotiation literature, competitive and cooperative behavior and motives of public sector employees in order to arrive at the main hypotheses. Next, the experimental design of this study is revealed in the methods section before we discuss the results and discuss the findings.

NEGOTIATIONS

Negotiation is: 'the process of back-and-forth communication aimed at reaching agreement with others when some of your interests are shared and some are opposed' (Ury, 1993). All negotiation situations share a number of common characteristics (Lewicki et al., 2015). Negotiation consists of two or more actors. There is a conflict of (perceived) needs and desires between the two or more actors. Actors negotiate by choice. A give and take process is expected. Actors prefer to negotiate and search for alternatives (as opposed to struggle or to fight publicly).

The process of negotiation has tangible outcomes like prices and intangible outcomes like the need to win or avoid loss or the need to obtain or keep a good reputation. Negotiators are interdependent and the outcomes are influenced by the interdependence of parties' goals (Raiffa et al., 2002). Generally, two types of negotiations are distinguished: constant/zero-sum games or distributive bargaining (where achieving one party's goals blocks the other one's goals) and variable/non-zero- sum games or integrative bargaining (where both parties achieve gains without blocking each other's goals). Most negotiation settings are somewhere in between the two, which is called mixed scanning. Both claiming a part from a fixed pie and creating value by bringing issues on the table can coexist in the same negotiation setting, and in varying degrees (Lewicki et al., 2015).

In public management literature, negotiation research has focused on power and conflicts (Perry & Levine, 1976), negotiation in networks (Klijn & Koppenjan, 2012) and for example in European Union negotiations (Tallberg, 2008). Similarly, cooperation literatures in public management focus primarily on organizations while fewer studies consider the individual negotiator (Eg., Thomson and Perry 2006).

Cooperation and competition in negotiations

Negotiators may choose to compete over a shared set of resources or to cooperate with their opponents in finding a solution (Lewicki et al., 2015). Cooperation may lead to greater mutual benefit than competition (Fehr & Gächter, 2000b). In reality, more options other than cooperation and defecting may be available to negotiators such as avoiding and compromising. These can arguably be seen as a degree of cooperation or competition (Rahim & Magner, 1995; Shell, 1974). For instance, in prisoner-dilemma games, players choose between cooperation and defecting (Esteve et al., 2015; Raiffa et al., 2002; Schelling, 1980).

In simple negotiation settings, individuals with high self-interest are thought to employ a *competing* style since this maximizes the individual pay-off at the cost of the pay-off of others. *Cooperation* is used when individuals consider the gains of others as well (Antonioni, 1998). Since individuals often pursue not only rational self-interest, but also other goals like joint outcomes or a fair distribution of resources it seems that their attitude towards goals will affect the selection of negotiation style (De Dreu & Boles, 1998; Van Lange, 1999).

One-shot and repeated negotiations

In game theory, repeated and one-shot interactions are studied. In one-shot games, negotiators are concerned with short term payoffs as there are no potential repercussions (Carmichael, 2005). In repeated games, negotiators consider their own reputation, the shadow of the future and retaliation opportunities (Raiffa et al., 2002). For example Selten and Stoecker (1986) found that in a finite repeated game, players started with mutual cooperation, followed by an initial defection, and then mutual defection. More repetitions in general seem to induce more cooperative behavior and defection later in the game (Kreps, Milgrom, Roberts, & Wilson, 1982) while reputation effects reduces cooperation (Camerer, Loewenstein, & Rabin, 2003, p. 450). In other words, players do not always play the dominant strategy for the period (cf. Aumann, Maschler, & Stearns, 1995).

In games in which players create a public good together, the contributions and cooperation of players usually start high and decline with time (Fehr & Gächter, 2000b). The introduction of strong punishments – negative consequences – will also lead players to cooperate (Ibid.). Public sector negotiations are frequently iterative and repetitive. Individuals who have negotiated in the past, expect to do so in the future. For instance public-private partnerships require many moments of coordination and negotiation (Edelenbos & Teisman, 2008; Skelcher, 2005). Moreover, these types of negotiations are typically cross-sectoral and deal with issues at more than one level like practical implementation and finances. During these repeated negotiations, individual negotiators may choose to cooperate or to compete.

Public Service Motivation

One distinguishing element between public sector employees and private sector employees, is Public Service Motivation (PSM) (Perry, 1996). PSM is a set of beliefs, values and attitudes that 'go beyond self-interest and organizational interest, that concern the interest of a larger political entity and which induces through public interaction motivation for targeted action' (Vandenabeele, 2007, p. 547). Earlier work has connected PSM to increased odds of whistle blowing in the public service (Brewer & Selden, 1998), self-selection into the public service (Delfgaauw & Dur, 2010; Tepe, 2016) and to ethical leadership (Wright, Hassan, & Park, 2016).

PSM consists of four dimensions: interest in politics, contributing to the common good, self-sacrifice and compassion (Perry, 1996; Vandenabeele, 2007). Compared to private sector employees, public sector employees are more attached to politics and policy, are interested in working for a public cause, and have higher levels of compassion and self-sacrifice (Brewer & Selden, 1998; Perry, 1996; Vandenabeele, 2007). As public-sector employees have a higher PSM score than private sector employees, they are on average more interested in politics, more compassionate and more likely to display self-sacrificial behavior. Moreover, they are motivated to work for a public cause, essentially, creating a public good. These differences between public servants and private sector professionals are often attributed to self-sorting

into either the public or private sector, meaning that individuals with a set of social norms and motives are attracted to particular organizations that fit with their motives (Tepe, 2016).

We argue that these characteristics are important in negotiations as they will affect negotiation behavior. Similarly, these norms and motivations – PSM - will also make public and private sector employees behave dissimilar when forced to choose between cooperation and competition as these appeal to different à priori motives. For example compassion has been linked to the desire to engage in future negotiations and the willingness to achieve joint gains (Allred, Mallozzi, Matsui, & Raia, 1997). The potential to achieve future gains are non-existent in a one-shot negotiation. In repeated interactions however, this may lead to more cooperation. Put differently, repeated negotiations may strengthen the effect of PSM on cooperation. Similarly, sacrificial behavior is central to the process of negotiations. When negotiators engage in the 'dance of concessions', they engage in making small sacrifices in order to reach an agreement. Low PSM individuals will feel less need to make sacrifices in order to achieve agreement in single-shot negotiations. At the individual level, this could be beneficial. In repeated interactions, not making sacrifices may lead to repercussions and punishments.

H_1: In a repeated negotiation, high-PSM negotiators behave more cooperatively than low-PSM negotiators regardless of their opponent.

If we insist that cooperation is the opposite of competition (Rahim, 2011; Raiffa et al., 2002; Shell, 1974), this implies that private sector employees will behave more competitively in negotiations. When two public sector employees negotiate, they will both behave more cooperatively. When two private sector employees are matched, they will behave less cooperatively. Negotiations between public sector employees and private sector employees will lead to behavior in between of cooperation and competition. This leads to two additional hypotheses in which cooperation is conditional on the opponent.

H_2: In a repeated negotiation, high-PSM negotiators matched to high-PSM negotiators act more cooperatively than low-PSM negotiators matched to low-PSM negotiators.

H_3: In a repeated negotiation, high-PSM negotiators matched to low-PSM negotiators act less cooperatively than high-PSM negotiators matched to high-PSM negotiators, but more cooperatively than low-PSM negotiators matched to low-PSM negotiators.

METHOD AND DATA

In this section, we elaborate on the laboratory experiment we carried out. First, we describe the participants and the overall design and process of the experiment. Next, we get into the experimental conditions, the negotiation game and the stated preferences of our subjects.
In order to examine the relation between negotiator type (public sector employee or private sector employee) and contributions in a negotiation, our subjects were given a low stakes negotiation task (see section on negotiation game). We tested our hypotheses in a cubicle computer laboratory at a Dutch university in a between-subjects design using Z-tree (3.4.2) to administer the experiment (Fischbacher 2007). A total of eight sessions were administered, which took about 75 minutes each. All communication of the participants was done via their computer.

A computerized laboratory experiment offers some very specific advantages over other experimental types (Anderson & Edwards, 2015; Charness & Kuhn, 2011; Morton & Williams, 2010). A laboratory experiment enables researchers to study the interactions between individual negotiators. Moreover, a laboratory experiment offers control and reduces potential confounding effects that are not observed (Morton & Williams, 2010). Also, a laboratory experiment does not rely on narratives or self-reported measures (Tepe & Prokop, 2017). Finally, by sharing the experimental code, computerized experiments can easily be replicated using different samples, and/or different manipulations.

We recruited graduate and undergraduate public administration and business administration students for participation as these students are known to differ in PSM (Perry, 1996; Vandenabeele, 2007). These participants have registered for participation in experiments via the university subject-pool. The participants could enroll for the experiment via digital invitations (Greiner, 2015). Participants with more than two no-shows were not invited to participate.

Negotiation game

The participants played a repeated symmetric linear public goods game in 100 rounds (ten times ten decisions). A public goods game enables us to study negotiation by tracing the offers and outcomes of individual negotiators. Moreover, it offers the negotiators an opportunity to choose between competition and cooperation (cf. Hauert, De Monte, Hofbauer, & Sigmund, 2002; Semmann, Krambeck, & Milinski, 2003).

For each decision, the negotiators receive 10 units. From those units, the negotiators simultaneously decide how much they want to invest into a public good. Once the contributions to the public good are made, they are multiplied by 1.5. The total sum is equally divided over the negotiators. The individual payoff of the negotiators is the remainder not invested from the initial 10 units and their profit from the public good. After this step, the

process is repeated. Consequently, the individual payoffs are conditional on the contributions of both negotiators.

A competing negotiator would choose to set the contribution as low as possible. When both negotiators do this, a public good is not produced. Negotiators who cooperate will contribute the maximum number of initial units (10 in our game). This is because this will increase the odds of obtaining a higher group outcome. Thus, contributing more equals cooperation while contributing less comprises a more competitive strategy.[3]

The participants were reimbursed for their participation based on individual performance. The exchange rate of experimental units to pay-out was €0.008. The participants received a show-up fee of €3,- and the mean payment was €14,80, which is slightly above minimum wages. The game was identical for all the participants, regardless of the conditions. The participants are aware that they play with the same opponent over the length of the experiment; the game is repeated and there is no re-matching. The subjects are not aware of the identity of their opponent as they are in computer-cubicles.

Moreover, the players are monolithic in the sense that they do not have to deal with constituencies. The negotiators have full information on the range of potential agreements and payoffs but are unaware of the actions of their opponent until the outcome is calculated after each contribution is made.

Process

Paper-based instructions were handed out and read out aloud by the researcher (see figure 1). Then, the participants received an on-screen pre-test questionnaire containing generic questions (i.e. what is your year of birth and in what type of study program are you enrolled?).

Based on the answers to the study question in the pre-test questionnaire, the participants were matched by the computer in such a manner that three experimental conditions could be observed: a high-PSM subject plays against a high-PSM subject, a low-PSM subjects plays against a low-PSM subject and finally, a high-PSM subject plays against a low-PSM subject (See table 1). As participants are either public administration or business administration students, the matching in our experiment is stratified. Within the strata, the matching to negotiation opponents is random.

The three experimental conditions will allow us to observe the differences between individuals with high and low PSM (hypothesis 1) as well as the combinations between formed dyads by focusing on the group level (hypothesis 2).

3 The participants (N) receive an endowment of $y>0$ units. The participants invest $0 \leq x_i \leq y$ to the public good. The invested amount is multiplied by α_0 and divided over the participants in the group. For individual participants, this yields a payoff function of: $U_i(x_1,\ldots,x_N) = y - x_i + \alpha(x_1,\ldots,x_N)$ where $\alpha = \frac{\alpha_0}{N}$ (cf. Capraro, 2013).

Table 1: Allocation of participants during the negotiation game.

Group 1	Group 2	Group 3
High-PSM	Low-PSM	High-PSM
↕	↕	↕
High-PSM	Low-PSM	Low-PSM

Following the experiment, the participants received a post-test questionnaire. Upon finishing the questionnaire, the participants were debriefed and reimbursed based on their in-game performance. The order of events during the experiment is presented in figure 1.

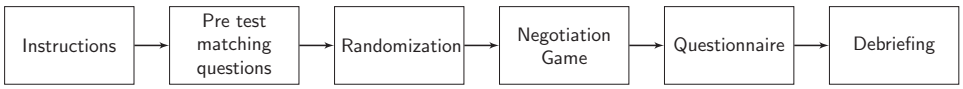


Figure 1: Order of events during the experiment.

A pilot session with N=12 participants was administered prior to the experiment. The pilot session has led to improvement of the positioning of items on screen and text size of the post-test questionnaire. The statistical power ($1 - \beta$) of this particular study is .72 (3 groups, n=104, α=.05, df=17, f=.282). The tests of the three hypotheses were conducted using Bonferroni adjusted alpha level of 0.016 per test (0.05/3).

Post-experimental questionnaire

In the post-test questionnaire, we administered a number of relevant background and demographical characteristics of the subjects. To check the theoretical differences between individuals in the public administration- and the business administration programs, we measured public service motivation using the 18-question version of the questionnaire (Vandenabeele, 2008).

As self-efficacy impacts negotiator performance, we measured negotiation beliefs by using the standardized 7 question scale (Elfenbein et al., 2008; Kray & Haselhuhn, 2007). The original English version was translated back-and-forth by two researchers independently.

In order to measure stated negotiation style, the Rahim Organizational Conflict Instrument II (ROCI-II) was used (Rahim & Magner, 1995). The ROCI-II measure contains 28 questions which generate percentile scores on five theoretically distinct modes of negotiations, including

competition and cooperation. The inclusion of this instrument enables us to see to what extent behavior in our negotiation matches to self-reported styles.

We measured Social Value Orientation by means of a decomposed game in which respondents choose to split a given amount over the 'self' and a fictive 'other' (Van Lange, 1999). The Social Value Orientation reveals patterns of preferences of a priori outcomes for the 'self' and 'others' (Ibid.) Based on this, individuals can be categorized to be either pro-self or pro-social. We use social value orientation to check whether the height of the contributions are conditional and happen only when others contribute, or are unconditional (Frey & Meier, 2004).

RESULTS

Our main expectation is that public- and business administration students differ in public service motivation, which in turn leads to degrees of cooperation conditional on matching. In our sample, public service motivation scores differ for public administration students (M=3.44, SD=0.33) compared to business administration students (M=3.25, SD=0.34) (t=-2.84, p=0.005). This entails that public administration students and business administration students differ in motives with regard to interest in politics, working for a public cause, compassion and self-sacrifice.

The distribution of gender, age, negotiation beliefs and social value orientation did not differ significantly over the experimental conditions (see table 2). This confirms that we have three experimental conditions with high-PSM dyads, mixed-PSM dyads and low-PSM dyads while the other background variables are stable and homogenous over the experimental conditions. This means that any effect of the negotiation dyads must be attributed to the matching based on PSM. Finally, the participants in the 'mixed' condition seem to have a lower preference for cooperation based on the ROCI-II questionnaire (Rahim & Magner, 1995). In further analysis, we will add this self-reported variable as a control.

Table 2: Descriptive statistics, by experimental condition.

	High-PSM - High-PSM	Low-PSM - Low-PSM	High-PSM – Low-PSM	Total	Test Statistic
N	30 (29%)	40 (38%)	34 (33%)	104 (100%)	Chi Square $X^2 = 1.46$ $p = .481$
Female	13 (43%)	20 (50%)	13 (38%)	46 (44%)	Chi Square $X^2 = 1.04$ $p = .593$
Age (SD)	20.73 (2.44)	21.18 (1.66)	21.52 (2.69)	21.16 (2.27)	ANOVA $F = 0.978$ $p = .338$
PSM (SD) Reliability = .72	3.54 (0.31)	3.30 (0.33)	3.19 (0.31)	3.33 (0.35)	ANOVA $F = 9.76$ $p = 0.00^{***}$
Negotiation Beliefs (SD) Reliability = .76	2.80 (0.58)	2.69 (0.53)	2.58 (0.60)	2.69 (0.57)	ANOVA $F = 1.18$ $p = 0.309$
ROCI-II Cooperation[4] Reliability = .74	4.06 (0.33)	4.09 (0.36)	3.88 (0.40)	4.01 (0.37)	ANOVA $F = 3.40$ $p = 0.037^{*}$
ROCI-II Competition Reliability = .82	3.2 (0.79)	3.1 (0.77)	3.3 (0.71)	3.91 (0.75)	ANOVA $F = 0.635$ $p = 0.532$
Pro-Social	2 (15.4%)	6 (46.15)	5 (38.36%)	13 (100%)	Chi Square $X^2 = 2$ $p = .367$
Pro-Self	23 (28.75%)	31 (38.75%)	26 (32.5%)	80 (100%)	Chi Square $X^2 = 1.22$ $p = .542$
Neither Pro-Social or Pro-Self	5 (45,45%)	3 (27.27%)	3 (27.27%)	11 (100%)	Chi Square $X^2 = .727$ $p = .695$

Note: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

The first hypothesis: 'In a repeated negotiation, high-PSM negotiators behave more cooperatively than low-PSM negotiators regardless of their opponent' is supported by the data. Indeed, over the experiment and across conditions, public administration students contributed more on average (M=7.17, SD=3.34) than business administration students (M=6.95, SD=3.51) (t=3.27, p=.001). This is also evident from figure 2 (right-hand side).

4 Note that the ROCI-II inventory includes compromising, obliging and avoiding styles also (Rahim & Magner, 1995). No significant differences between business administration- and public administration participants were found on these negotiation styles.

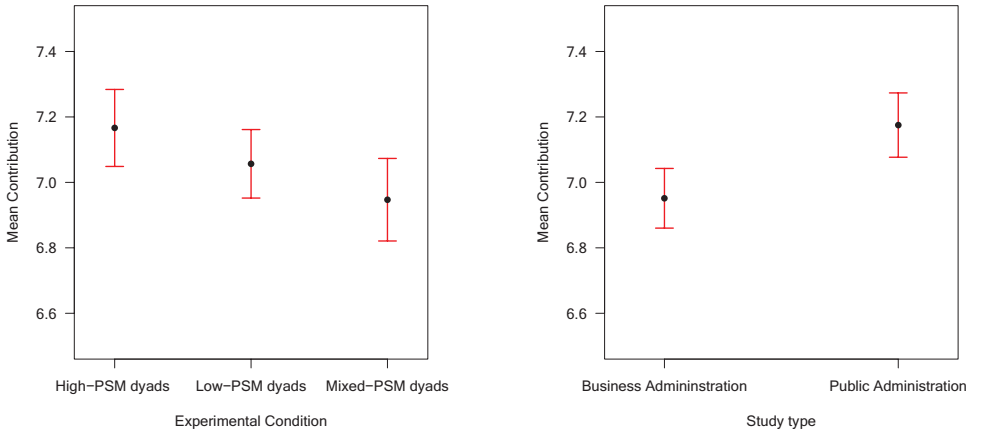


Figure 2: Contributions by: experimental condition (left side) and by: study type (right side).

Our second hypothesis, 'In a repeated negotiation, high-PSM negotiators matched to high-PSM negotiators act more cooperatively than low-PSM negotiators matched to low-PSM negotiators', is not supported by the data. We have tested this hypothesis in two ways. First, the contributions did not differ statistically significantly over the conditions for the entire experiment (pooled data) (See figure 2).

Secondly, we calculated a hierarchical tobit-model in which the negotiation dyads were allowed to differ from each other (See table 3). In our experiment, many negotiators contributed the maximum possible amount which resulted in truncated data. A tobit-model is able to handle this truncated data (Tobin, 1958). Moreover, a hierarchical model corrects for dynamics between subjects that were matched together in dyads (cf. Honoré, 1992). From figure 3 we learn that the slopes differ across the conditions. Finally, a hierarchical model enables us to focus on negotiation decisions made instead of dyad level data or condition level data. The model was built in successive steps. For this, we used the *xttobit* package for random effects in Stata 12.1. The experimental conditions were recoded to dummies with the mixed (Low-PSM - High-PSM) category as reference category.

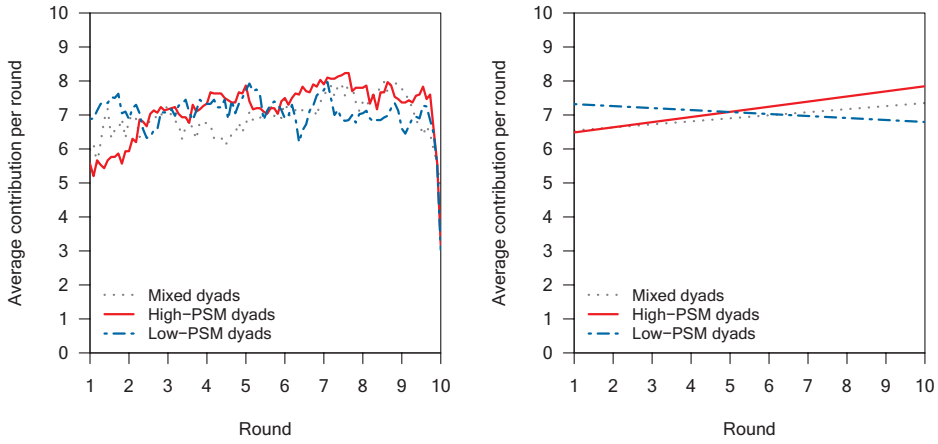


Figure 3: Development of contributions over the experiment (left=raw contributions, right=smoothing applied).

In models I and II (table 3) the results for the second hypothesis are insignificant. Matching in our experiment does not have an effect on contributions and cooperation during the experiment. A time dummy (period) shows that contributions slowly increase over the experiment and a gender dummy shows that male negotiators contributed more than female negotiators on average. Gender also has a positive significant effect on the height of the contributions during the negotiation. Model III shows that participants enrolled in a public administration program contributed significantly more than participants enrolled in a business administration program, regardless of the experimental conditions (Table 3).

In the fourth model, we found an association between the contributions during the experiment and the self-reported competitive negotiation style. A higher score on competition was significantly associated with lower contributions during the experiment. While there is a statistically significant correlation between cooperation and competition (r=-0.26, n=104, p=0.007), there is no statistical association between cooperation and the negotiation contributions in the experiment. Also, over the length of the experiment (figure 3), the average contribution develops differently across the experimental conditions. The group with business administration students has a slightly negative slope, whereas the public administration group has a positive slope, while all starting between 6.5 and 7.5 for the contributions. The slope of the mixed group lies in between of these lines.

Table 3: Hierarchical tobit estimates on contributions during the experiment. SE's in parentheses. Negotiation dyads as random effects.

	Model 1 Conditions (Mixed as reference)	Model 2 Period and gender	Model 3 Study type	Model 4 ROCI
Fixed Effects				
Intercept	9.373***	8.045***	9.327***	10.624***
	(6.84)	(5.90)	(11.77)	(9.54)
Study dummy (1=PA)			0.784***	
			(5.56)	
High-PSM – High-PSM dummy	-0.048	-0.005		
	(-0.02)	(-0.00)		
Low-PSM – Low-PSM dummy	0.857	0.909		
	(0.46)	(0.49)		
Period		0.180***		
		(12.56)		
Male dummy		0.595***		
		(4.82)		
ROCI Cooperation				0.049
				(0.31)
ROCI Competition				-0.355***
				(-4.21)
Random effects				
σ^2 Negotiation dyads	5.589***	5.549***	5.622***	5.630***
	(9.55)	(9.55)	(9.54)	(9.54)
σ^2 Residuals	3.503***	3.485***	3.494***	3.497***
	(98.38)	(98.43)	(98.39)	(98.38)
Wald X^2 (df)	0.30 (2)	181.34 (4)	30.95 (1)	19.46 (2)
Log Likelihood	-16777.20	-16685.35	-16761.87	-16767.624
AIC	33564.406	33384.699	33531.743	33545.495
BIC	33600.654	33435.446	33560.741	33581.491
N	10400	10400	10400	10400
N-truncated (right)	4853	4853	4853	4853

Note: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

The third hypothesis: 'In a repeated negotiation, high-PSM negotiators matched to low-PSM negotiators act less cooperatively than high-PSM negotiators matched to high-PSM negotiators, but more cooperatively than low-PSM negotiators matched to low-PSM negotiators' is not confirmed by the data. There are differences between the conditions, but these are not statistically significant. This is evident if we inspect the contributions during the negotiation visually (figures 2 and 3). The level of cooperation can also be seen in model I and II which are corrected for time, gender and matching in dyads. Model I and II also disconfirm this hypothesis.

DISCUSSION AND CONCLUSION

In this section, we discuss some limitations before turning to the conclusions to be drawn from our study. The findings of our study have some limitations which we have tried to alleviate as much as possible.

First of all, we have used students as subjects in our experiment. Students provide a homogenous sample, which makes detecting an effect more straightforward (Calder, Phillips, & Tybout, 1982). The main question remains whether public sector employees and private sector employees would respond similarly to the treatments in our experiment. Moreover, public service motivation can be seen as a relatively stable predisposition (Perry & Hondeghem, 2008), or as a learned social norm (Chen, Hsieh, & Chen, 2014; Tepe, 2016). Compared to students, practitioners may exhibit more or less motivation based on experience and workplace socialization. Studies that compare student samples and practitioners remain inconclusive on this particular question (Eg., Liyanarachchi and Milne 2005). While a substantial part of public administration experiments employs student samples (see Li & Van Ryzin, 2017), there is no agreement on this matter. Students have been found to behave more rational than a generic population (Belot, Duch, & Miller, 2015). This might imply that practitioners would act less cooperative in a similar negotiation setting. Note that no cooperation is a Nash equilibrium, while cooperation leads to a higher payoff at both individual and group level. Moreover, practitioners are socialized in their respective sectors, which may induce more collaborative behavior in public managers as a consequence of learned roles and more competition in private sector managers. This limitation and its implications, call for more research, including experimental designs using practitioner samples.

Secondly, the participants in our experiment were financially incentivized. Compared to the situation in practice, individual negotiators, especially those in the public service are not incentivized as public budgets are prioritized and rewards for individual behavior are uncommon (Verhoest, Roness, Verschuere, Rubecksen, & MacCarthaigh, 2010). Similarly, it could be argued from the view of transaction-cost theory that in high stakes negotiations in practice, negotiators will weigh the consequences of cooperative or competitive behavior

more diligently (Jap, Robertson, Rindfleisch, & Hamilton, 2013). The latter is especially relevant as many professional negotiations are in fact principal-agent settings. We leave to future research how individual public service motivation influences behavior in these more complex and realistic settings.

Thirdly, a laboratory experiment provides an artificial situation in which our subjects are asked to negotiate. A laboratory experiment offers control to the researcher while it also reduces the risk of confounding effects. In our experiment, liking or body language presents a potential risk in studying negotiations that could distort our findings in a face-to-face experiment (Morton & Williams, 2010). Like in many experimental designs, experimenter demand effects could have an impact on our findings (Orne, 1962; see Zizzo, 2010). Similarly, it is possible that the lower than ideal power in this study has led to false negatives. Consequently, replication of this study is much needed, preferably with a sample of practitioners.

This study makes a number of contributions to the literature by bringing together literature on negotiation and individual characteristics of future public- and private sector employees. Negotiations at the individual level are seldom studied in public management literature. Our study brings together negotiation literature with public service motivation. We study behavior in a repeated negotiation which differs from single shot interactions that have been studied earlier in relation to cooperative behavior (Esteve et al., 2015). We address the generalizability of studies that focus on cooperation in decision-making by extending it to negotiations.

Secondly, we contribute to the field by using an experimental laboratory design that enables us to study behavior of individuals and dyads of negotiators. Although experimental research designs are common in negotiations research, experimental laboratory designs are upcoming but still relatively rare in public administration (Bouwman & Grimmelikhuijsen, 2016; Li & Van Ryzin, 2017). Experimental designs fit well when there is a focus on behavior, using micro-level theory with individual decision makers (Grimmelikhuijsen et al., 2017).

We found that overall, High-PSM individuals (public administration students) behave more cooperatively than Low-PSM individuals (business administration students). In general, individuals tend to cooperate in repeated public goods experiments (Fischbacher, Gächter, & Fehr, 2001). Although this game is a low-stakes negotiation setting, preferring a cooperative negotiation style is potentially beneficial at the group level, rather than at the individual level. Recent studies have found that individuals are sometimes conditional co-operators where cooperation heavily depends on the precedent of a collective (Delfgaauw & Dur, 2010). In our study, the participants could only see how they performed in dyads and not how others performed. For the public sector this is especially relevant as one of the demands placed on public sector employees is that they behave cooperatively in many circumstances as this facilitates problem solving (McNamara, 2012; O'Leary & Bingham, 2009). Our study shows that high-PSM individuals also cooperate unconditionally. The latter could be a specific effect of the motivation to contribute to the public good of high-PSM individuals. As negotiations

generate public outcomes with real consequences in the public sector, this finding shows that reaching agreement by cooperation seems to be prioritized by high-PSM individuals. Additionally, in repeated public goods games, the trend of contributions is often found to have a downward slope (Fehr & Gächter, 2000b). When players negotiate repeatedly, they tend to punish freeriding behavior, even if it is costly. In our experiment, the slope is slightly upwards for the high-PSM dyads, implying that they may have punished freeriding behavior to a lesser degree. This raises the question whether public managers are less likely to punish competitive behavior in practice, as private sector managers (high-PSM) do (cf. Steinel & De Dreu, 2004). Moreover, it implies that low-PSM individuals use more unethical tactics, regardless of their opponents (eg. Robinson et al., 2000).

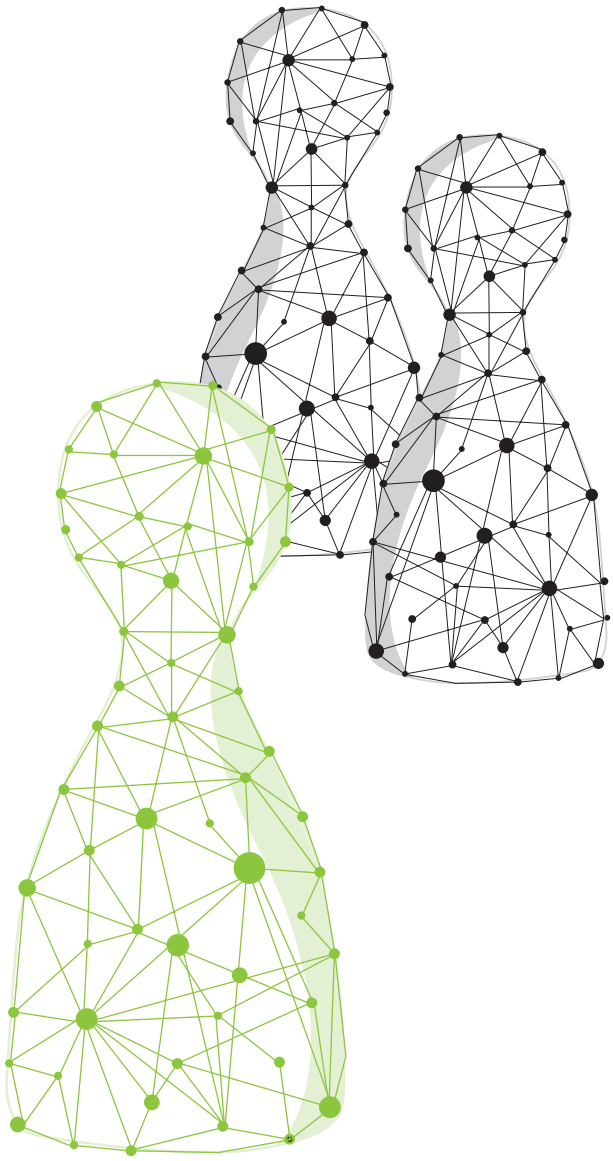
In our experiment, the motives of the matched opponents have no significant effect on the contributions in the negotiations. This finding contrast sharply with the social-psychological literature on this matter. For instance Greenhalgh (1985) found that personality directly affects negotiator contributions and outcomes. Building on the similarity-attraction theory, more similar negotiators are found to experience less conflict and also reach agreement faster (Wilson, DeRue, Matta, Howe, & Conlon, 2016). Note that our participants could only communicate by offer and counteroffer, whereas in the experiment of Greenhalgh et al., (1985) and the experiments of Wilson et al. (2016), negotiators could also see each other.

The differences between the public and private sector have blurred over the past years as the result of NPM developments in the public sector and CSR developments in the private sector (Bullock et al., 2015). This blurring of sectors also stresses the need for knowledge on this topic (Antonsen & Jørgensen, 1997). Whether the characteristics and motives of the practitioners in the once distinct sectors are also more alike is unclear. Based on our experiment, high-PSM and low-PSM individuals behaved differently and also reported dissimilar to the standardized ROCI-questionnaire. This finding partly mirrors the findings of Esteve et al. (2015) but in a repetitive negotiation setting.

These findings are of particular relevance for settings where public and private sector employees need to cooperate. For instance, in public-private partnerships. Because cooperation levels – and thus outcomes – differ for the negotiators from the different sectors, this may put public sector negotiators at a comparative disadvantage in win-lose negotiations. In more complex negotiations, the tendency to cooperate may lubricate negotiations on the other hand. How this works and to what extent this can be understood from the perspective of public service motivation is an important avenue for further research.

Our findings have two important implications for public managers and policymakers. First, it suggests that public managers (high-PSM) will collaborate more unconditionally. This is beneficial in variable-sum negotiations, while it may be harmful in constant or zero-sum negotiations. Secondly, for public managers it may prove difficult to reach agreement in repeated variable sum negotiations with low-PSM negotiators such as private sector negotiators or entrepreneurs.

Future research efforts could be aimed at replicating this study by using different samples such as practitioners and in different contexts. Moreover, a replication using a different multiplier in the public goods game or testing cooperation with payoffs in the domain of losses (Kahneman & Tversky, 1979) seems a good addition. Similarly, it is unclear under what circumstances individuals behave competitively or cooperatively while they report to have no strong preference for a particular style of negotiations. Although we did find a relation between contributions and self-reported competition, more research is needed to find out under what circumstances self-reported measures align with measured behavior.



CHAPTER 3

COMPARING PUBLIC- AND PRIVATE SECTOR NEGOTIATORS UNDER VARYING LEVELS OF NEGOTIATION SPACE, A LABORATORY EXPERIMENT

ABSTRACT

It is often claimed that more discretion positively impacts performance, increases trust in followers and leads to extra-role behaviors. However, in game theory, the discretion of a negotiator does not change the solution and the performance remains unchanged. On top of this, negotiator discretion levels may be a consequence of organizational contexts. For instance, bureaucrats are thought to have very little discretion.

In this paper, we use a variable sum negotiation experiment to test 1) whether the level of negotiation discretion matters for the negotiation outcomes and 2) whether public and private negotiators perform differently under varying levels of discretion.

We manipulate negotiation discretion - the set of solutions to a negotiation problem to test our hypotheses for public sector and private sector negotiators.

The results contradict the game theoretical prediction as the solution to a negotiation problem varies with the level of discretion, while we found no evidence that students of public- and business administration performed differently.

This chapter is under review in an international peer-reviewed journal.

INTRODUCTION

Negotiation is a central part of work in organizations (Lewicki et al., 2015). Work relationships, working in teams or matrix organizations, and entrepreneurial employees place pressures on managers and employees to be effective negotiators (Ibid.). Similarly, the acquisition of goods and services and coordination of public policy is one of the core activities of employees in the public sector that depend heavily on negotiations carried out by civil servants (Dijkstra, Van Assen, & Stokman, 2008; Laegreid, 2000).

One element that typically structures how negotiations unfold, is the level of maneuvering space or discretion that negotiators have. Negotiation discretion is seen as the number of solutions for negotiators to agree on, or – the number of available options to a given decision problem (Lewicki et al., 2015; Raiffa et al., 2002, p. 110). On top of that, Negotiation discretion will naturally vary and may depend heavily on the strategic negotiation setting, such as the number of available options (cf. Fisher et al., 1999) or on elements of contexts such as sectoral or even cultural differences (Lewicki et al., 2015, p. 476). For instance, public bureaucrats are thought to have less discretion in general than private sector employees (Bozeman, 2004).

In this paper, we pursue two goals. First, we test experimentally whether negotiators are sensitive to variation in negotiation discretion. Secondly, we test whether this sensitivity varies for public sector and private sector negotiators. This leads to the following research question: *Do variations in negotiator discretion lead to different outcomes for public versus private sector employees?*

This question is important as various theoretical claims about the effects of discretion have been made (Wangrow, Schepker, & Barker, 2014). Discretion is the latitude of action for a decision maker (Hambrick & Finkelstein, 1987). In HRM, more discretion for managers is thought to lead to more extra-role behaviors and higher individual performance (Gellatly & Irving, 2001; Shin & Konrad, 2014). Teams of employees are also thought to benefit from more discretion as it leads to higher team outputs (Leach et al., 2005). Public managers are thought to have less discretion compared to private sector managers (Van Wart, 2003). Public organizations experience more political interference and have less financial discretion (Bozeman, 2004). The positive connection of discretion with performance and the fact that private sector employees have more discretion suggest that private sector employees will perform 'better' under otherwise equal circumstances simply because of their relatively higher discretion.

In game theory however, discretion is not believed to impact the outcome or the quality of the outcomes at all. Regardless of the discretion of the decision maker, the theoretical solution to a negotiation problem stays the same.

This study contributes to the literature by juxtaposing the expectations from game-theory and managerial discretion by applying it to variable sum negotiations. The impact of discretion on outcomes of variable sum negotiations, has to our knowledge not

systematically been tested before. Empirical research on this topic has been limited to fixed sum negotiations (both negotiators want to have as much as possible from the same good) and on the role of alternatives: choices that lie outside the negotiation (Schaerer, Loschelder, & Swaab, 2016). In general, less discretion and smaller negotiation space may lead to more competitive behavior (Kim & Fragale, 2005). Moreover, many studies focus primarily on fixed sum negotiations. Although a focus on fixed sum negotiations provides useful insights, pure fixed sum negotiations are rare in practice (Lewicki et al., 2015). Moreover, the contradictory predictions from game theory and management literature have not been juxtaposed before while the differences for the public- and private sector have been neglected altogether in the context of negotiations. As public and private sector negotiators often meet in high-stakes negotiations such as infrastructural public-private partnerships, this topic is equally relevant for practice.

In the coming sections, we first discuss the literature on negotiations and the game theoretical view on negotiation discretion. We derive a hypothesis about the relation between the level of discretion and the nature of the negotiation solution. Subsequently, we discuss the literature on management discretion as well as discretion for public- and private sector negotiators. From this latter discussion we derive our second hypotheses about the differences in negotiation behavior between private and public employees under variations of the negotiation space. In the subsequent sections we present the experiment, followed by a presentation of the results, the discussion of the findings and a conclusion. Additional materials can be found in the appendices.

THEORY AND HYPOTHESES

In this section, we first discuss negotiations, negotiation discretion from the game-theoretical perspective and management literature to arrive at our hypotheses.

Negotiation

Negotiation is: 'the process of back-and-forth communication aimed at reaching agreement with others when some of your interests are shared and some are opposed' (Ury, 1993, p. 1). Negotiations are usually between two or more people. There is a conflict of needs and desires. People negotiate out of free will. A give and take process can be expected. People prefer to negotiate rather than to fight openly, to have one side dominate and the other to capitulate, permanently break off contact, or take their dispute to some higher authority. Finally, negotiators are usually concerned with managing tangibles (prices, terms and contracts) as well as intangibles (like the need to maintain face or the urge to appear 'tough') (Lewicki et al., 2015, pp. 7–9).

Another central element is interdependence. Actors need each other to reach their own objectives (Raiffa, 1982). If actors can reach their goals without others, there is little reason to negotiate at all. For example, when there is a power difference such that A dominates B. Then, A is able to get what he or she wants by dominating the other (Raiffa, 1982).

Alternatives and options

Negotiators have some level of maneuverability during the negotiation. We distinguish between alternatives and options (Fisher et al., 1999). Alternatives are choices that lie outside the negotiation. Individuals tend to believe that having more alternatives leads to better negotiation outcomes (Schaerer et al., 2016). In reality, more alternatives outside the negotiation lead to lower first offers and worse outcomes. These are thought to be the result of a 'distortion' of the perceived alternatives (Galinsky, Schaerer, & Magee, 2017).
Options are the choices that lie within the negotiation, which is often called the bargaining zone. More options equal a larger bargaining zone and vice-versa. Present study focuses on the options the negotiators have.

Negotiation from a game theoretical perspective

In game theory, the possible outcomes (deals) of a negotiation process are represented in utility (or payoff) space. This space is spanned by the utility scales of the respective players. The utility scales in fact are von Neumann-Morgenstern utility functions, but they may be seen as measurement scales at interval level. If there are two players, then, consequently, the payoff space is the real plane $\mathbb{R}^2$ spanned by the dimensions of utility, one for each player. A point in this plane represents the utilities of the players for the respective bargain. Thus, if we have (u, v) in the plane, then this point represents a bargain having utility u of Player I and utility v for Player II. In the sequel we discuss a two-player negotiation process.

In negotiations, only a part of all the possible outcomes is feasible. There are numerous reasons that bargains are not feasible and that they are out of reach. For example, bargains may be considered unreasonable by the players, they may be unethical or forbidden by society. The representation of the set of feasible outcomes leads to a region in space which usually is called the bargaining space (see Figure 1). This region is denoted by B. B is assumed to be a convex and closed set in the utility space. Convexity means that for any two points (u, v) and (u', v') in B, all points on the line connecting (u, v) and (u', v') are also in R. Closeness of a set means that it contains its boundary (or more technically that its complement is open).

A special point is the point in which no agreement is arrived at. This point is called the point of disagreement (see Figure 1). This special point is denoted by $d = (u_0, v_0)$. We assume that (u_0, v_0) is in B, that is, that it is feasible. In a two-player negotiation situation (See figure 1) we see that the players will not accept deals with a lower utility than they receive in the point of no agreement. That is, they prefer any bargain (u, v) with $u \geq u_0$ and $v \geq v_0$ to the point of disagreement and they will resist any bargain (u, v) with $u < u_0$ and $v < v_0$.

Formally, a bargaining game is an ordered pair (B, d) where $B \subseteq \mathbb{R}^2$ is the bargaining set and where $d \in B$ is the point of disagreement.

A solution for a bargaining game is a rule or (arbitrage) scheme that assigns to each bargaining game (B, d) a point from B. Mathematically, a solution is a function $\boldsymbol{f}: \mathfrak{B} \rightarrow \mathbb{R}^2$ such that $\boldsymbol{f}(B, d) \in B$ for any $(B, d) \in \mathfrak{B}$. Here, $\mathfrak{B}$ is the set of bargaining games. Such a function $\boldsymbol{f}: \mathfrak{B} \rightarrow \mathbb{R}^2$ is also called an *arbitration rule*.

Clearly, there are many possible solutions for a bargaining game. In order to reduce the number of possible solutions, it is necessary to impose additional restrictions. The most important restriction in this respect is that the solution lies on the Pareto efficiency frontier. The Pareto efficiency frontier is the set of all points on the boundary of B such that no player can gain more utility without worsening the utility level of the other player. See Figure 1. The line connecting the max utility of Player 1 with the max utility of Player 2 constitutes the efficiency frontier. If we move along this line from a point to another point, then one of the players will gain in utility while the other player will lose utility. We denote the Pareto efficiency frontier of any B with $P(B)$.

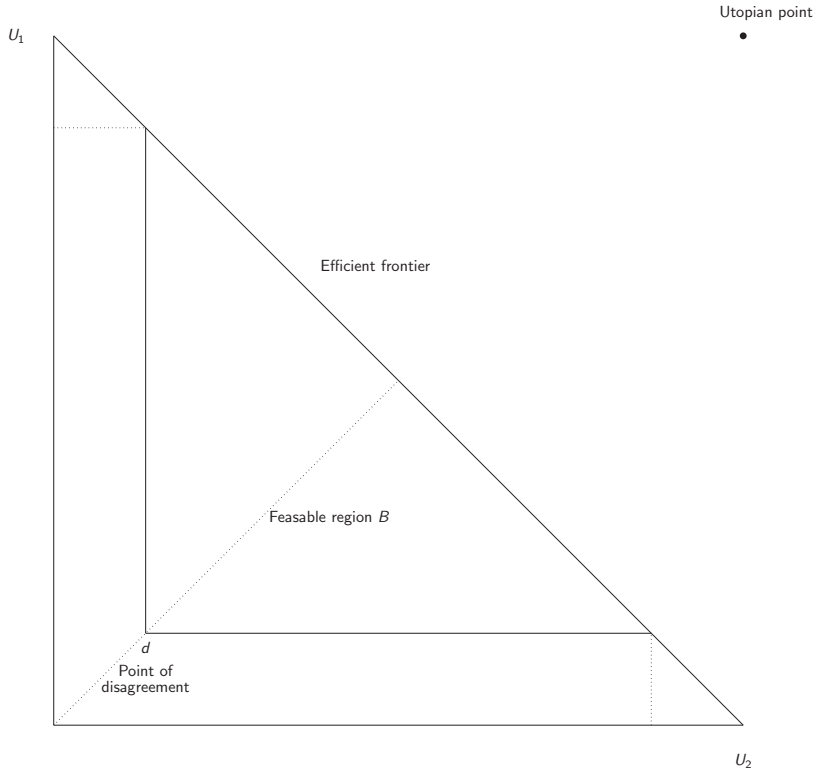


Figure 1: Feasible solutions in 2-persions variable sum game (adapted from Raiffa et al., 2002:263).

Pareto Efficiency is one of the basic conditions (or axioms) imposed by Nash on solutions in his famous article on the subject (Nash, 1950). In this paper, he formulates the so-called Nash bargaining solution (NBS), which is the scheme that assigns the point (u^*, v^*) to a (B, d) such that $(u^* - u_0) \cdot (v^* - v_0)$ is maximal, that is, it is the maximal product of the players' utility. It can be proven that $(u^*, v^*) \in P(B)$ for any bargaining game (B, d).

Another important solution concept is the Kalai-Smorodinsky solution (Kalai & Smorodinsky, 1975). Consider again Figure 1. The max utility for Player 1 is at the angle of the utility scale U_1 with the Pareto efficieny frontier; the max utility for Player 2 is at the angle of U_2 with the same frontier. If we draw a perpendicular on this point of U_1 and one on the max point on U_2 then these perpendiculars will intersect each other in a point $x = (x_1, x_2)$ where the utilities for each player are maximal. However, this point usually lies outside the region $\mathfrak{B} \subseteq \mathbb{R}^2$, i.e., it is not feasible. For this reason, it is called the Utopian Point of the game. Now, if we draw a straight line from disagreement point $d = (u_0, v_0)$ in the bargaining set to the utopian point $x = (x_1, x_2)$ outside the bargaining set B, then this line will intersect the Pareto efficiency frontier. This intersection point is called the Kalai-Smorodinsky solution (KSS) of the game. Clearly, this solution is in $P(B)$. Moreover, this point is feasible and is at the shortest distance from the Utopian Point, which justifies this solution. For a nice (axiomatic) study of both the NBS and the KSS solution see Peters (2010).

In our experiment, we assume symmetric positions of the test subjects. Moreover, we assume that utility is linear with respect to the points to be distributed. The set of all points $(u, v) \in B$ such that $u \geq u_0$ and $v \geq v_0$ is called the negotiation set. We will vary the size of this set by varying the d-point by drawing a line from the origin of the region to the middle of the hypotenuse, and by moving this d-point along this line. Clearly, this middle point is both a NBS and a KSS in all three cases.

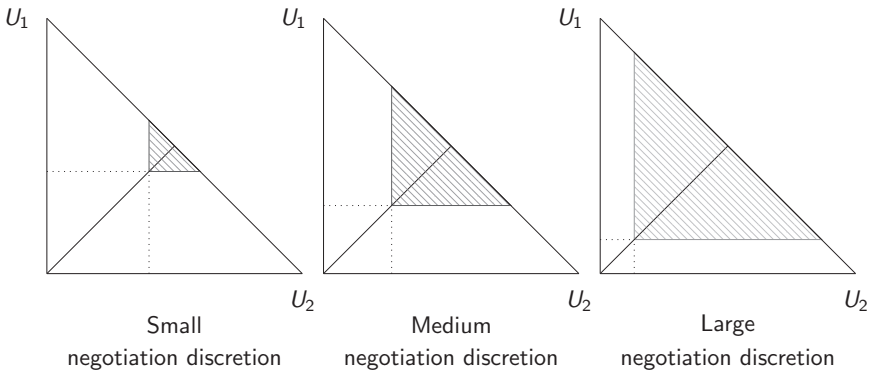


Figure 2: Differences in negotiation discretion.

By varying the size of the set, we vary the number of potential solutions to the negotiation game. A larger negotiation space contains more potential outcomes and more potential to find a solution. However, according to game theory, the solution itself is invariable to this amount of discretion for the negotiators. If we expand the feasible region towards the utopian point or to the NBS, the NBS and the KSS remain the same.

Managerial discretion

Little attention has been devoted to the link between discretion and negotiation outcomes while discretion literature covers many aspects of the work of employees and managers in the organizational context.

It is often assumed implicitly that more discretion leads to more productivity (Graham, 1992; Strain, 1999). In management studies, a meta-analysis of empirical results showed that high levels of perceived control was associated with high levels of job satisfaction, commitment, involvement, performance and motivation (Spector, 1986). Managers with more discretion display a greater variety of in-role and extra-role behaviors (Gellatly & Irving, 2001). Moreover, teams are claimed to perform better as a result of higher discretion (Leach et al., 2005)

In the public sector, discretion is often related to the work of Lipsky (Lipsky, 1980), who found that bureaucrats, especially at the street-level, use their discretion to implement policies as they see fit. The discretion of street-level-bureaucrats is associated with their willingness to implement policies (Tummers and Bekkers 2014; Tummers, Steijn, and Bekkers 2012). Although public managers make efforts to reduce the use of discretion of workers in order to 'go by the book', street level bureaucrats resist top down steering and control as they feel they have to be able to adapt to individual cases (Rutz, Mathew, Robben, & de Bont, 2017). Frontline workers such as school teachers, police officers and health professionals experience shrinking levels of discretion, lowering their support for top-down policies (Musheno and Maynard-Moody 2016; Tummers 2012). To summarize, discretion is important for the performance of workers in general, in HRM practices and in the public sector for frontline workers.

For negotiations, the question remains whether more discretion also leads to 'better' negotiator performance. For negotiators with a smaller bargaining zone, meaning less space and less autonomy, alternatives to a proposed deal have a stronger effect on how they experience trade-offs (Kim & Fragale, 2005). In other words, changes in autonomy have an effect on the experienced power of negotiators, leading to different results. Moreover, negotiators also use different tactics under varying levels of autonomy (Babcock, Loewenstein, & Wang, 1995)

Summarizing, there are two contradictory predictions. From the more formal game theory, we derive that regardless of the autonomy of the negotiators, the negotiation-solution remains the same. The negotiation outcomes do not change. In our study, this is the null-hypothesis (H_0) as the theoretical expectation is that there is no effect of variations

in negotiation discretion. From more informal works in HRM, management and public management, it can be argued that the negotiation-solution changes when the discretion of negotiators also changes. As a result, we hypothesize that:

H_1: The solution of the negotiation problem varies with the size of the negotiation set.

Discretion for public and private sector negotiators

Given the differences between the contexts of public- and private sector as well as its respective employees we may expect differences in negotiation process and outcomes (See for example Bozeman, 2004; de Graaf & van der Wal, 2010; Tepe, 2016; Vandenabeele, 2008). Compared to private sector organizations, public organizations are subject to higher levels of political interference and they have less financial discretion (Bozeman, 2004). Moreover, public organizations are classically associated with high levels of red tape: "rules, regulations and procedures that entail a compliance burden without advancing the legitimate purposes they were intended to serve" (Bozeman, 2000, p. 12). Findings suggest that public- and private sector organizations do not unquestionably differ in red tape but the perceptions of managers and citizens may differ for public and private sector organizations (Rainey, Pandey, & Bozeman, 1995).

Furthermore, public servants are known to differ from private sector employees in a number of ways. Public servants have a lower tolerance for risks (Buurman et al., 2012), higher public service motivation (Perry & Wise, 1990; Vandenabeele, 2007) and a lower need for closure (Franco & Rouwette, 2016; Webster & Kruglanski, 1994). A lower tolerance for risks is traditionally seen as a characteristic of public servants and the public sector as a whole (See for example: Bozeman & Kingsley, 1998; Hartog, Ferreri Carbonell, & Jonker, 2002; Wildavsky & Dake, 1990). Similarly, public servants systematically rate themselves as more interested in politics, more interested in contributing to the common good, more willing to sacrifice their own interests in favor of a greater good and, having higher levels of compassion (Vandenabeele, 2007). These are characteristics better known as public service motivation (PSM) (Perry & Wise, 1990). Interestingly, even undergraduate students in public administration also seem to differ from business administration students on public service motivation (Christensen et al., 2013; Perry & Wise, 1990; Vandenabeele, 2008). Arguably, this suggests that motivation to serve the public interest is connected to personality, rather than a form of study or work related socialization (a trait versus state) (Brewer & Selden, 1998).

Another illustration of personality differences, is the concept of need for closure. Need for closure is "a desire for definitive knowledge on some issue and eschewal of confusion and ambiguity" (Kruglanski, 2013; Kruglanski & Webster, 1996, p. 264). Franco and Rouwette (2016, p. 883) found that MBA students have a higher need for closure than students in specialist MSc programs (MPA, among others). This suggests that MBA graduates are less able or willing

to handle complex and multidimensional negotiation situations, in which the weighing of different values is central (Kruglanski & Webster, 1996).

The dissimilarities between public- and private sector employees such as risk propensity, PSM and need for closure suggest that they will not respond in similar fashion to similar decision problems or in similar negotiation settings. Risk-taking is inherently connected to negotiations. Making an opening offer could be seen as a risky (but effective) strategy as it reveals one's intentions in a negotiation (Raiffa et al., 2002, p. 146). Evidence is mounting that differences in public service motivation (PSM) impacts the outcomes of decision-making and cooperation (Esteve et al., 2015). Similarly, Tepe (2016) found that public administration students (individuals with high PSM) behaved more trusting and trustworthy than business and law students. To sum up, based on contextual public sector discretion and individual characteristics, we expect that individuals with higher public service motivation and a lower risk tolerance, such as public servants, respond stronger to variations in discretion than individuals with lower public service motivation and a higher risk tolerance. As a consequence, managers from the private sector will respond less strongly to variations in discretion. Therefore, our second hypothesis is:

> **H_2:** The effect of variations in the size of the negotiations set is stronger for public sector negotiators than for private sector negotiators

We notice that this hypothesis is in line with game theory. In game theory each player is supposed to have a payoff function (expected utility function) that values the possible outcomes of the game for the respective player. The above discussion of the differences between public and private sector employees inclusive the hypothesis imply that the payoff functions of public sector players differ from those in the private sector. For example, as suggested above, public sector players might bear risk-avoiding payoff functions while private players might have risk-seeking ones. Note, however, that the nature of the difference is not specified in the hypothesis.

EXPERIMENTAL METHOD

We have tested our hypotheses in a computer laboratory at a Dutch university. The laboratory consists of 32 laptops, connected to a central server. The experiment itself was programmed and administered in Ztree version 3.6.7 (Fischbacher, 2007). A total of six sessions took place over the course of three days in spring 2016. We used a between-subjects design with three conditions for testing the causal effect of negotiation space on the negotiation process and outcome (see Figure 2).

Participants

We recruited a mixed sample of (*n*=158) graduate and undergraduate students from a course in public administration and a course in business administration. We did not use pecuniary incentives for the participants as the experiment was part of a teaching course (classroom experiment). Moreover, negotiators in an organizational context seldom experience the financial consequences of professional negotiations (cf. Rhodes, 1994). The participants were instructed that the points were valuable.

Negotiation game

The participants were asked to engage in a variable-sum negotiation game in dyads. In this game, a surplus is divided over players within the dyad. The negotiators could propose a split of the surplus back and forth by entering this on screen. The participants could make as many proposals back and forth as they wished before they accepted or rejected the agreement. Allowing negotiators to make back and forth proposals approximates the dynamic nature of negotiations (a give and take process) better than one-shot games do and mimic a negotiation in a more natural way. In order to accept an agreement, at least one negotiator had to press 'agree' to an offer of the opponent (see appendix 1). Negotiators could only agree to proposals of the opponent, not their own. We implemented a timeframe for each negotiation decision of two minutes. When players had not reached an agreement when the time has ended, both players received nothing.

We manipulated the level of discretion for the negotiators. There are three experimental conditions: small discretion, medium discretion and large discretion. See table 1 for the experimental conditions. The randomization to one of the experimental conditions as well as matching to an opponent was carried out by the computer.

Table 2: Experimental conditions

Negotiation discretion	Small	Medium	Large
Total range of points	90-100	80-110	70-160
Size of the surplus	10	30	90

The negotiation game is a variable-sum game as the negotiators could decide what the maximum size of the surplus would be. For example, in the 'small' condition, the negotiators could agree on a 50/50 split of 90 points, but also on a 50/50 split of 100 points. Negotiators could also opt for any other division of points.

Procedure

Upon entry, the participants were seated at one of the computer cubicles. The instructions were displayed on the computer screen of the subjects (see figure 3 for the procedure and

Appendix II for the instruction texts). After the participants had read the instructions, they could ask questions.

Figure 3: Process during experiment.

In total, the participants were asked to make 20 negotiation decisions. After ten negotiation rounds the participants were re-matched to different opponents. The participants were matched to their partners in one of the three conditions: small discretion, medium discretion and large discretion (see table 1). After the final round, a questionnaire was presented to the subjects (See next section).

Measures

There are two dependent variables, which are both negotiation outcomes. The first outcome is how the value of the surplus is divided over the players is the first outcome. This measure ranges from 0% to 100% of the surplus for each negotiator, for each round. Second, as the players were able to agree on a range of outcomes, we are also able to focus on the efficiency of the outcomes. If for example two players in the small condition (where the surplus lies between 90-100) agree on splitting 90 points equally, this is a less efficient outcome than splitting 100 points equally. Outcomes that lie on the pareto-efficient line have a higher total value than outcomes below the line.

A post-test questionnaire was administered to check background characteristics of the participants. This questionnaire contained background questions such as age and gender, the BIG-five inventory (see Denissen, Geenen, Van Aken, Gosling, & Potter, 2008), and the standardized Risk Taking Index (RTI) (Nicholson, Soane, Fenton-O'Creevy, & Willman, 2005).

RESULTS

In total, 158 graduate and undergraduate students participated in the experiment (See table 3). The background characteristics of the participants are distributed reasonably evenly over the experimental conditions. Due to the simple randomization combined with multiple sessions, a lower number of participants ended up in the large discretion condition. Moreover, there is a relatively large number of women in the small discretion condition. For testing the main effect, gender will be used as a control variable. Hypothesis tests were carried out using Bonferroni adjusted alpha levels of 0.025 per hypothesis test (0.05/2). A post hoc power test, using the condition with the smallest N, revealed that the power of this study is .955 (α=.05, df=2, N=158, F=.321).

Table 3: Descriptive statistics (*n*=158). Standard deviations in parentheses.

	Small discretion	Medium discretion	Large discretion	Overall	Test
N	(43%)	(31%)	(24%)	(100%)	CHISQ, X^2=9.33, P=0.009
Age	22.85 (4.29)	22.80 (2.53)	21.60 (2.61)	22.53 (3.46)	ANOVA, F=1.838, P=0.163
Female	47%	22%	37%	35%	CHISQ, X^2=6.14, P=0.046
PSM	3.26	3.10	3.27	3.36	ANOVA, F=2.346,
Alpha = 0.66	(0.40)	(0.50)	(0.40)	(0.45)	P=0.099
Extraversion	3.65	3.63	3.48	3.60	ANOVA, F=0.962,
Alpha = 0.83	(0.66)	(0.54)	(0.70)	(0.63)	P=0.384
Agreeableness	3.58	3.50	3.55	3.55	ANOVA, F=0.32,
Alpha = 0.66	(0.52)	(0.47)	(0.49)	(0.59)	P=0.727
Conscientiousness	3.59	3.46	3.51	3.53	ANOVA, F=0.781,
Alpha = 0.77	(0.60)	(0.59)	(0.48)	(0.57)	P=0.46
Neuroticism	2.68	2.49	2.72	2.63	ANOVA, F=1.623,
Alpha = 0.81	(0.57)	(0.73)	(0.67)	(0.65)	P=0.201
Openness	3.59	3.40	3.51	3.51	ANOVA, F=2.43,
Alpha = 0.66	(0.46)	(0.50)	(0.43)	(0.47)	P=0.091
Risk	2.00	2.14	1.87	2.01	ANOVA, F=2.798,
Alpha = 0.74	(0.52)	(0.53)	(0.57)	(0.57)	P=0.064

H_1: The solution of the negotiation problem varies with the size of the negotiation set

Our first hypothesis: the solution of the negotiation problem varies with the size of the negotiation set is supported by the experimental data. To test this hypothesis, we standardized the outcomes of the experimental conditions by dividing the negotiation outcomes by the total pie sizes of the respective conditions. Over the entire experiment, we found that the size of negotiation discretion has a significant effect on negotiation outcomes, $F(2,155)=6.676$, $p=0.0016$). A post-hoc Scheffé test showed that the medium-large and small-large groups did not differ from each other. The small and medium negotiation space groups differed significantly at $p = .01$.

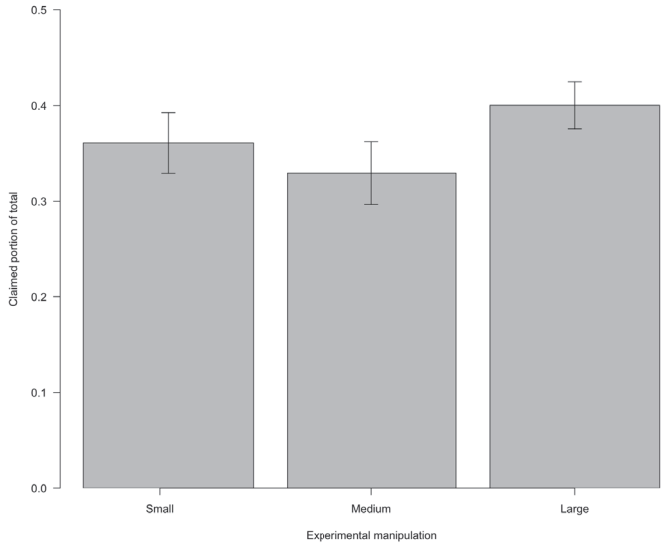


Figure 4: Size of the claims by experimental condition.

The negotiators made offers and counteroffers, potentially adding up to a total of 100% of the 'pie' in all conditions. If the surplus was equally shared between the negotiators, both get 0.5 (or 50%) of the total. Negotiators could also divide less value than 100% of the surplus. From figure 4 we can observe that the negotiators in the medium condition claimed the least of the surplus (y-axis), followed by the large discretion condition. The negotiators in the small discretion condition claimed more of the surplus than those in the medium discretion condition and this differs significantly from medium and large discretion.

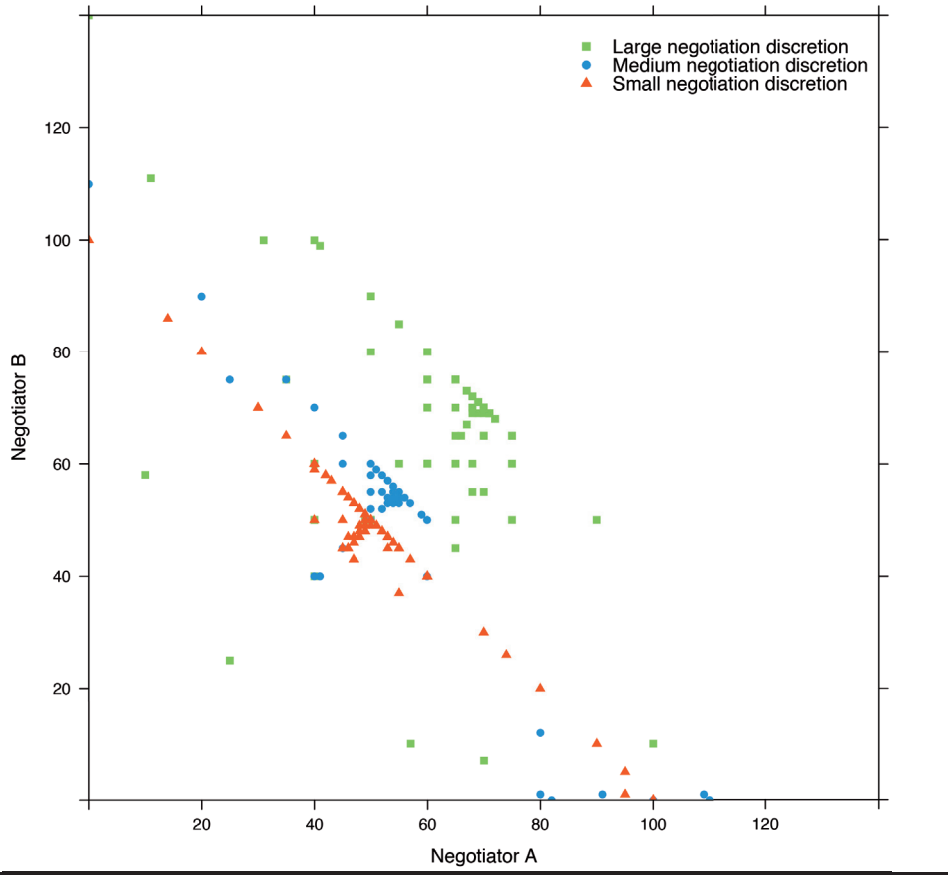


Figure 5: Agreements between negotiators for the small, medium and large discretion condition.

In figure 5 we observe that the majority of the agreements lie on the imaginary line between the origin of the axes (0,0) and the utopian point for the negotiators. Furthermore, not all agreements maximize the payoffs. That is, they agree on a less efficient payoff smaller than the maximum. To control for the background characteristics of the participants, we calculated an OLS regression in successive steps (see table 3). The first model shows the difference between the experimental conditions with the medium condition as reference category.

The second model shows that there is no specific round or learning effect present during the experimental sessions that should be corrected for. Model three shows that gender has a significant effect on the outcomes in addition to the main effect. Despite that differences in negotiation behavior between men and women are well established in the literature, the effect could be the result of our randomization as men and women were unbalanced over the experimental conditions (see table 3).

Table 3: Effect of experimental conditions and background characteristics on negotiated agreements (OLS, *n*=158).

	B	SE B	t	p
Model 1: Experimental treatment				
Intercept	0.329	0.015	22.04	0.000
Small negotiation discretion	0.071	0.020	3.61	0.000
Large negotiation discretion	0.031	0.023	1.38	0.168
$R^2_{Adjusted}$ =0.067, F(2,155)=6.676, p=0.001				
Model 2: Effect of experimental round/learning				
Intercept	0.352	0.021	16.90	0.000
Small negotiation discretion	0.069	0.019	3.57	0.000
Large negotiation discretion	0.034	0.023	1.50	0.136
Experimental round	-0.000	0.000	-1.57	0.119
$R^2_{Adjusted}$ =0.076, F(3,154)=5.313, p=0.001				
Model 3: Participant characteristics				
Intercept	0.372	0.136	2.73	0.007
Small negotiation discretion	0.068	0.020	3.42	0.001
Large negotiation discretion	0.024	0.023	1.02	0.309
Male	-0.068	0.020	-3.34	0.001
Age	-0.001	0.003	-0.40	0.687
PSM	-0.014	0.021	-0.67	0.502
Risk	0.037	0.017	2.16	0.032
Extraversion	-0.022	0.014	-1.62	0.107
Agreeableness	0.031	0.019	1.67	0.097
Conscientiousness	-0.003	0.015	-0.22	0.829
Neuroticism	-0.017	0.014	-1.21	0.228
Openness	0.007	0.019	0.350	0.724
$R^2_{Adjusted}$ =0.119, F(11,146)=2.929, p=0.000				
Model 4: Interaction effects				
Intercept	0.349	0.031	11.15	0.000
Small negotiation discretion	0.089	0.037	2.38	0.018
Large negotiation discretion	0.034	0.039	0.84	0.400
Male	-0.026	0.035	-0.74	0.462
Male x small negotiation discretion	-0.035	0.044	-0.80	0.423
Male x large negotiation discretion	-0.017	0.049	-0.34	0.733
$R^2_{Adjusted}$ =0.096, F(5,152)=4.321, p=0.001				

The insignificant interaction between gender and experimental condition in model four shows that the effect is not due to the male/female ratio over the experimental conditions. Risk-taking and agreeableness both have a small statistically significant effect on the size of the agreement.

H_2: The effect of variations in the size of the negotiations set is stronger for public sector negotiators than for private sector negotiators

In our experiment, both public administration students and business administration students participated. Based on the experimental data, we can test this (one-tailed) hypothesis in two separate ways. First, we distinguish between study types public administration and business administration as predictor for outcomes. Secondly, we use public service motivation (PSM) to make the same distinction. Arguably, the latter is a more precise measure to establish behavioral motives during negotiations as some individuals may have lower public service motivation, while being enrolled in a public administration program. This mirrors the situation in practice. Some employees with higher public service motivation may work in the private sector while employees with lower public service motivation could work in the public sector.

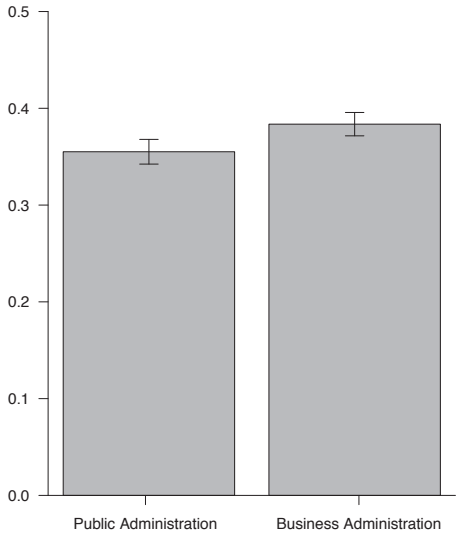


Figure 6: Claims of the surplus across experimental conditions, for public administration and business administration participants.

At face value the scores differ slightly (Figure 6). A students T-test reveals that the differences between the public administration (M=0.355) and business administration (M=0.383) students are insignificant (*t*=-1.62, *df*=148.49, *p*=0.053).

Additionally, we created two groups of negotiators based on the median score of 3.4 on the public service motivation questionnaire. This resulted in a low-PSM group in which the scores were ≤3.4 and a high-PSM groups with scores >3.4. The low and high groups were, again used for predicting the payoffs that the negotiators agreed on. Negotiators in the low-PSM group (M=0.361) differed slightly from the negotiators in the high-PSM group (M=0.377). Again, these differences were not statistically significant (*t*=-0.889, *df*=147.18, *p*=0.19). Therefore, we conclude that our second hypothesis: "The effect of variations in the size of the negotiations set is stronger for public sector negotiators than for private sector negotiators" is not supported by the experimental data.

DISCUSSION AND CONCLUSIONS

The aim of this paper was to answer whether variations in negotiator discretion in a variable sum negotiation leads to different outcomes and whether negotiator type: public- and private sector negotiators interact with this main effect. Not only are there natural variations in the discretion of workers in the public and private sector, managers also sometimes determine the amount of discretion of workers. The short answer to our question is that indeed, variations in negotiation discretion matters for the outcomes, while the theorized public-private differences do not exert an influence on this main effect.

We used two contradictory theoretical approaches to test our first hypothesis that the solution of the negotiation problem varies with the size of the negotiation set (H_1). The first approach is the formal game-theoretical expectation that the negotiators will do the same under varying levels of negotiation discretion (H_0) while the second, more informal approach predicts exactly the opposite: discretion will influence negotiation outcomes directly. We found that indeed, negotiator discretion seems to impact the claims made on the surplus and the outcomes in a variable sum negotiation setting. Our findings corroborate the results of earlier work on discretion that demonstrates the idea that discretion has an influence on performance. We accomplished this by using an experimental design that enables us to eliminate any confounding variables (Shadish, Cook, & Campbell, 2002).

In contrast, the experimental findings contradict the fundamental assumption of the theory of bargaining games that bargaining solutions only depend on the utility functions of the players and some point of disagreement. The solutions should be independent from the size of bargaining regions. However, the experimental findings imply that the solution of such games do also depend on the size of the bargaining space. Apparently, the attractiveness of the solutions varies with the size of the bargaining set. At the theoretical level this would imply

that solutions of bargaining games are functions not only of individual utility functions and some point of disagreement, but also of the size (volume) of the negotiation space. Since the findings show that different sizes lead to different solutions, and since solutions are yielded by arbitration rules, different sizes of negotiation space ask, clearly, for different arbitration rules. This a surprising result which is not in line with game theory. So far, the discussion which arbitration rule is empirically most relevant such as the Nash bargaining solution and Kalai-Smorodinsky solution is not settled in game theory. Our results show that it is even more complex empirically. The experimental participants in the 'small' condition claimed more from the surplus than the participants in the 'medium' condition. No differences were found between the 'large' condition and the 'small' or 'medium' condition. We do not have an explanation for this finding. It suggests a non-linear connection between size of bargaining spaces and bargaining solutions.

Secondly, we apply the debate on discretion to the negotiation literature by studying its effects in a variable sum negotiation. Our experimental design is unique in the sense that it combines a controlled laboratory setting with variable sum negotiations. Moreover, the participants could make offers and counteroffers before committing to an agreement. Variable sum negotiations occur frequently in practice and therefore provide a realistic test while much of the research has focused on constant sum negotiations

Our second hypothesis (H_2), that negotiators with a public sector background solve negotiation problems differently from negotiators with a private sector background is refuted as the results were statistically insignificant. The negotiation setting in our experiment was void of sectoral context, while the contexts of the public- and private sector may trigger specific role behaviors. For instance, the availability of resources and power may differ in the public and private context. At the individual level, we based our public/private distinction on the public service motivation scale (Perry & Wise, 1990). Despite that our participants differed on PSM, they did not exhibit different negotiation behaviors, suggesting a limited role for values in the context of our experiment. This goes against recent empirical findings that link public service motivation to different outcomes in a range of economical games (Esteve et al., 2016, 2015).

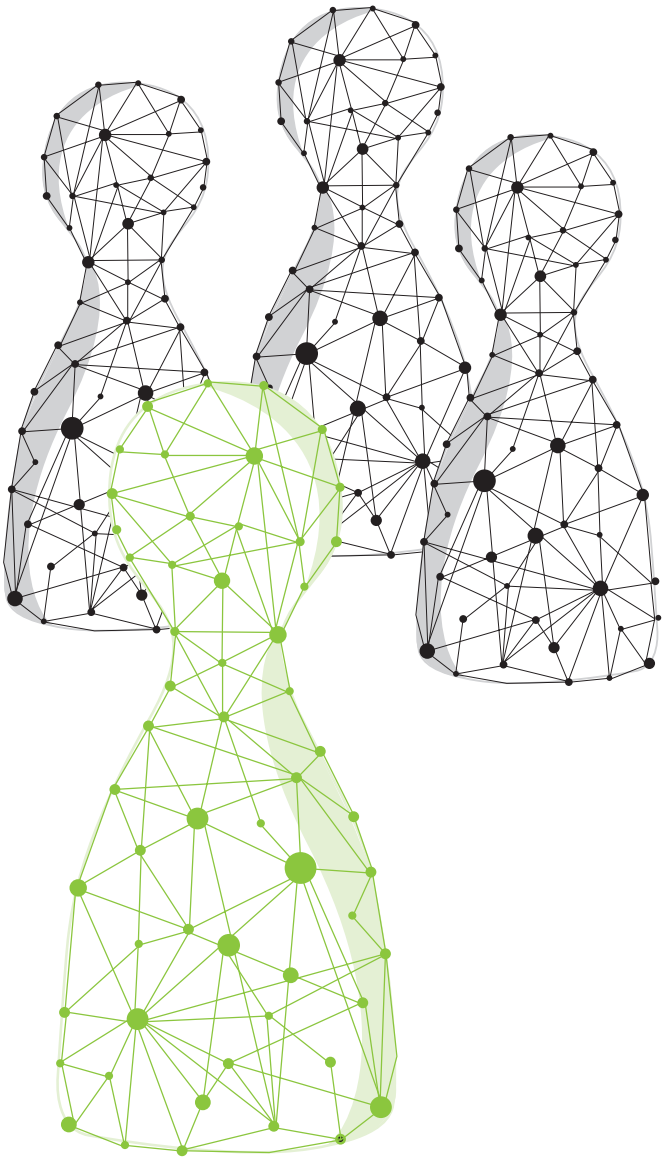
Limitations and future directions

Our study has two limitations that we have tried to alleviate as much as possible. In our experiment, we used student participants. While many experimental studies use student participants (Bouwman & Grimmelikhuijsen, 2016; Li & Van Ryzin, 2017), this practice has been criticized in social psychology and experimental economics for its low replicability (Open Science Collaboration, 2015). Our study should be replicated using practitioners from the public sector and the private sector. This could mitigate any potential drawbacks from using student-participants.

Secondly, the surpluses in our experimental vehicle are numerical which has the drawback that participants may attach different meaning to the points gained or lost in absolute sense. Negotiating over a one point from 10 points may be different from negotiating over one point from 90 points. In future research, this problem may be solved by displaying the surplus virtually instead of numerically.

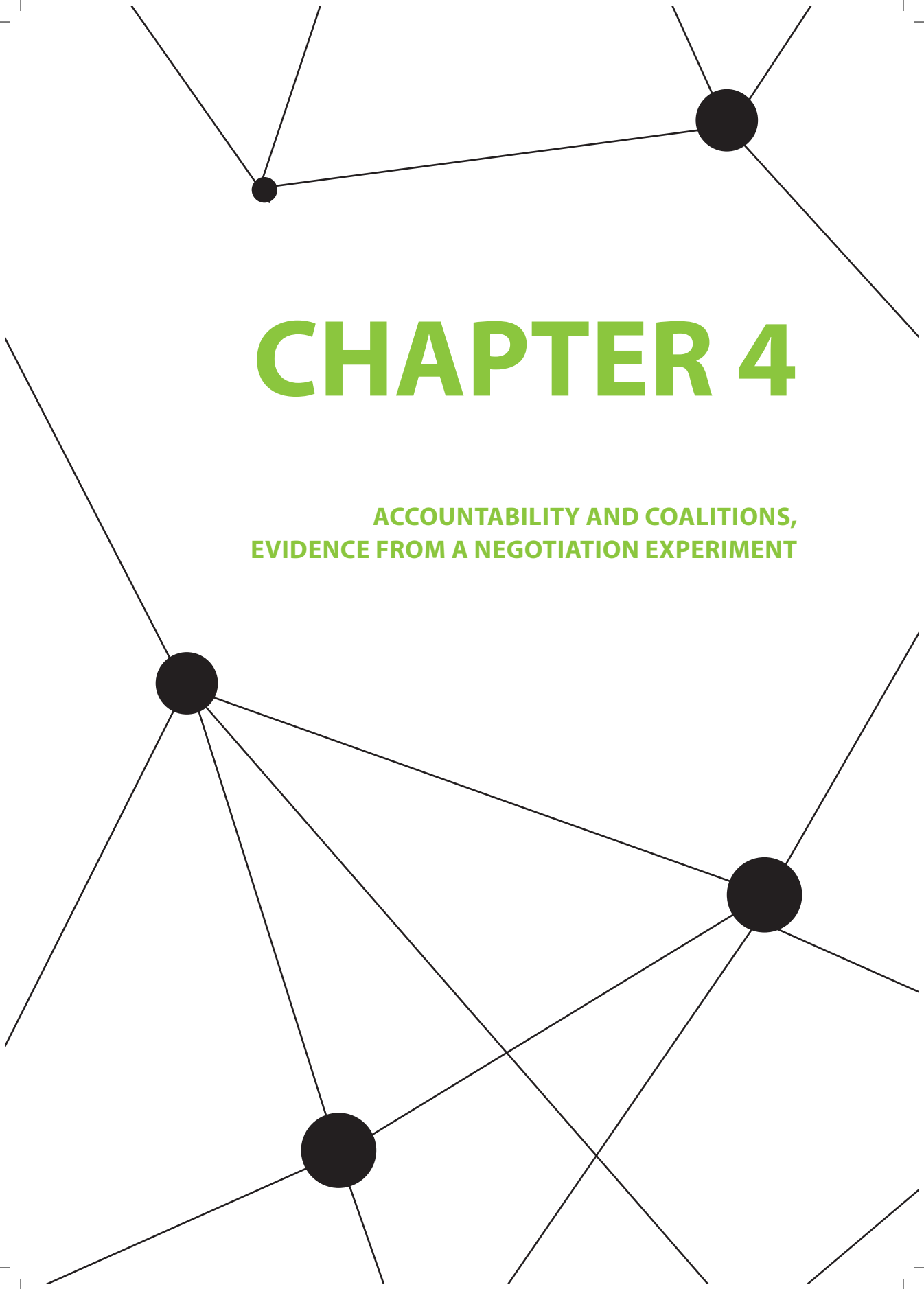
Given the important consequences for game theory, further research could aim at replicating the findings. Moreover, further research could also focus on the possible co-variation of bargaining solutions with the sizes of the bargaining spaces. Do larger spaces lead to greater differences in outcomes than smaller spaces? Moreover, according to prospect theory (Kahneman & Tversky, 1979; Tversky & Kahneman, 1986), individuals behave differently in cases of gains than in cases of losses. A very interesting research question is whether the effect remains when the negotiation setting is played in the domain of losses.

To our understanding, this is the only scholarly study that tests the effect of negotiator discretion on outcomes in a variable sum negotiation. The relative scarcity of studies is surprising, given the theoretical and practical relevance. Managers have to decide on the discretion of employees which appears to impact performance. Additional research is much needed to improve our understanding of discretion in variable sum negotiations and how individual differences between public and private sector negotiators interact.



CHAPTER 4

ACCOUNTABILITY AND COALITIONS, EVIDENCE FROM A NEGOTIATION EXPERIMENT



ABSTRACT

This article tests the effect of accountability on negotiation outcomes in a face-to-face classroom experiment. Student participants were asked to form coalitions in groups of three. In the treatment condition, negotiators were held accountable by a personal forum during the formation of the coalition. In the control condition, negotiators were not held accountable. Results show that accountability leads to lower group performance in coalition negotiations. Accountability also reduced the willingness of negotiators to include all negotiators in a "grand coalition." Rather, accountable negotiators reached agreement with a subset of negotiators. Accountability increased the odds of reaching no agreement. These findings challenge the idea of increased performance as a result of public accountability in the context of coalition negotiations.

This chapter is published as: Bouwman, R., van Thiel, S., van Deemen, A. and Rouwette, E. (2018), Accountability and Coalitions: Evidence from a Negotiation Experiment. *Public Administration Review*, 78: 37-47.

The dataset, instructions and posttest survey can be found here (Open Access): https://doi.org/10.17026/dans-zvw-hf9y

INTRODUCTION

Negotiation is one of the most common activities of all employees (Laegreid 2000; Susskind and Ozawa 1983). Negotiations focus, for example, on buying and selling goods or problem solving. In the public sector, negotiations involve coordination of inter- and intra-departmental tasks, the acquisition of goods and services and the allocation of budgets (Dijkstra, Van Assen, and Stokman 2008). An example would be implementation of healthcare policies with its many stakeholders. During implementation of these policies, representatives of patients' federations, hospitals and government have to negotiate practical implementation (see O'Toole 2000). Although the outcomes of negotiations by public servants can have great societal impacts, negotiation as a research topic has not gained much attention by public administration scholars. Some exceptions are the work of Medda (2007) in public-private partnerships, decisionmaking in policy implementation (Torenvlied and Akkerman 2004) or labour relations and collective bargaining (Riccuci 2011; Perry and Angle, 1979). As public organizations contribute to the public good by definition, individual negotiation outcomes by civil servants are often public outcomes as well.

Public accountability is consistently rated as the most important public value by civil servants (Van der Wal, De Graaf, and Lasthuizen 2008). Recent developments in Western democracies have only bolstered accountability measures by public organizations (Bovens, Schillemans, and 't Hart 2008, 225).

However, competing claims have been made about the effects of accountability. Accountability is often viewed as an instrument to prevent corruption of those in power. It is seen as instrument to increase perceived trustworthiness, enhance integrity and increase performance (Bovens, Schillemans, and 't Hart 2008). The problem of who exactly is to blame is a well-known difficulty of accountability (Thompson 2005). Accountability may lead to window-dressing (de Wolf and Janssens 2007) or to task overload for public servants.

Public accountability literature has some similarities to bureaucratic and legislative oversight literature (see for example: Shikano, Stoffel, & Tepe, 2017). While related, public accountability is different as the forum and actor are not expected to have divergent interests but more overlapping interests, while principals have power over bureaucrats, accountability forums do not necessarily have power. Moreover, bureaucratic-oversight literatures emphasize the relation between bureaucrat and principal, while accountability takes bureaucrats, principals and citizens as object of study.

While accountability is known to have an impact on thoughts, feelings and actions of individuals (Lerner and Tetlock 1999), public administration scholars have neglected its potential effects on specific activities of public servants, such as negotiating. Social psychologists have established that individual negotiators will be more '*contentious*' when they expect to be held accountable (Ben-Yoav and Pruitt 1984). Negotiators care for equality of outcomes when the accountability between negotiators is high (Kramer, Pommerenke,

and Newton 1993). When teams of negotiators are held accountable, the responsibility of the negotiated outcome is distributed over the team members (O'Connor 1997).

Still, individuals respond competitively to accountability mechanisms, leading to lower individual outcomes in negotiations (Ben-Yoav and Pruitt 1984). Thus, the effects of accountability on negotiator behavior and outcomes has been investigated in a limited number of studies, while the effect of accountability on negotiating a coalition by public servants has been neglected thus far.

Coalitions as a negotiation outcome are omnipresent in public policy networks (Provan and Milward 2001) and public-private partnerships (PPS) (see Skelcher 2005), among other settings, which reinforces the need for knowledge on this topic. In this study, we aim to fill this gap and ask: *Does public accountability lead to different coalitions and lower negotiator performance in coalition negotiations?*

We employed a face-to-face classroom experiment that enabled us to test the causal effect of accountability on negotiation outcomes by public servants. In negotiation research, experiments are often used to establish causal relations. Both laboratory and classroom experiments have been used in a range of negotiation studies (e.g. Embrey, Fréchette, and Lehrer 2014; Sinaceur et al. 2013).

Within public administration, the share of experimental work is still relatively small (Groeneveld et al. 2015). Experimental designs are increasingly seen as a rigorous method for testing and developing theory (Perry 2012; Margetts 2011; Anderson and Edwards 2015). Accountability scholars have suggested that experimental research could help in answering fundamental accountability questions by disentangling causes and effects (Koch and Wüstemann 2014).

THEORY AND HYPOTHESES

In this section, we first discuss literature on negotiations, on accountability in the public domain and on coalitions. Next, we combine these literatures to arrive at a set of five hypotheses to be tested in our experiment.

Negotiations

Negotiation is: 'the process of back-and-forth communication aimed at reaching agreement with others when some of your interests are shared and some are opposed' (Ury 1993). Examples of public sector negotiations are negotiations in public-private partnerships (Klijn et al., 1995), the allocation of scarce resources within organizations or negotiations with autonomous bodies; so called public service bargains (Hood & Lodge, 2006).

Negotiation situations share a number of common characteristics (Lewicki, Saunders, and Barry 2015). Negotiations have two or more actors which have a conflict of needs and desires. Actors negotiate by choice and a give and take process can be expected. Actors prefer to negotiate and search for alternatives rather than to struggle or fight publicly. Negotiation involves the management of tangibles (prices or terms) and intangibles (like the need to win or avoid losses and the need to obtain or keep a good reputation). The outcomes of negotiations are influenced by the interdependence of parties' goals (Lewicki, Saunders, and Barry 2015).

Two types of negotiations are often distinguished. Distributive bargaining are negotiations where achieving one party's goals blocks the other one's goals (Pruitt et al. 1978). Distributive negotiations are also known as constant/zero-sum games in game theory (see Scharpf 1994). The second type is known as integrative negotiation, where all parties achieve gains, or solve a common problem (Lewicki, Barry, and Saunders 2015). These are known as variable/non-zero-sum games in game theory (see Osborne and Rubinstein 1994; Schelling 1980; Peleg and Sudhölter 2007; Morrow 1994). Negotiations carried out by public servants may be constant sum, for example the acquisition of goods and services, or variable sum: seeking a solution to a policy problem together with other policy actors. In this study, we focus on variable sum negotiations.[5]

Accountability in the Public Sector

We define accountability in the public sector as: 'a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgment, and the actor may face consequences' (Bovens 2007).[6]

Because public servants operate on behalf of citizens or civil society, based on politically-defined mandates, public organizations are held publicly responsible for the outcomes they produce. This responsibility is determined by accountability through various oversight mechanisms (Bovens, Goodin, and Schillemans 2014). Accountability is seen as a mechanism of democratic control that is claimed to increase performance, enhance integrity of public governance and render perceptions of trustworthiness and transparency with citizens.

Central in the definition used in this study is that there are four distinctive elements (Bovens 2007, 7). An actor and a forum are in a relationship. Within this relationship, the actor has an obligation to explain and to justify his or her conduct. Afterwards, the forum can pose questions and pass judgment. Finally, the actor may face consequences. These consequences come in the form of sanctions or rewards.

5 See Osborne and Rubinstein (1994) and Schelling (1980) for a general introduction to game theory or Raiffa (2002), Peleg and Sudhölter (2007) or Morrow (1994) for an overview of cooperative game-theoretical introduction to negotiation.

6 For an overview of accountability literature see: Bovens (2005, 2006); Bovens, Goodin, and Schillemans (2014); Mulgan (2000a) and Behn (2001).

In many public organizations, the relationship between the actor and forum is legally binding. Therefore, it is especially the expectation of being held accountable (shadow of the future) or to face the consequences of performance that will alter the behavior of negotiators (O'Connor 1997).

Coalitions

This study focuses on coalitions as an outcome of negotiations. Coalitions are defined as: "a collection of parties within a larger social setting who work together to pursue mutually desirable goals" (Guo and Lim 2007; Murninghan 1986).

Coalitions have a number of characteristics. They are interacting groups of individuals. Coalitions are deliberately constructed and issue oriented. They exist independently of a formal structure, meaning that coalitions are not a formal group such as an organization or team that is created by design. Coalitions also lack a formal structure like internal hierarchy while leadership roles may form in existing coalitions. They focus on goals external to the coalition. And coalitions require concerted member action (Stevenson, Pearce, and Porter 1985; Lewicki, Barry, and Saunders 2015). Central in formed and pending coalitions is that the actors involved care about the outcomes (O'Connor 1997, 386). Coalition forming demands of negotiators to balance individual needs and desires against group needs and desires.

Accountability and negotiations

O'Connor (1997) found that negotiators paired in teams who are held accountable behave more dominantly or competitively. Accountable negotiators made fewer concessions, and employed more contentious strategies than their non-accountable counterparts (Klimoski 1972). Compared to non-accountable negotiators, this could lead to higher individual gains and lower group gains on average (Pruitt et al. 1978).

If mechanisms of accountability indeed lead to competitive rather than cooperative or problem-solving behavior, the difficulty of reaching an agreement will increase - especially in potential coalitions that aim to solve issues by negotiating. Accountability will lead to more competitive behavior during negotiations because negotiators will feel the social need to perform better for their 'forum' (see O'Connor 1997), or they may fear the consequences of bad performance (Bovens 2007).

> **H_1:** Accountable negotiators will show lower performance at the group-level than non-accountable negotiators.

As accountability leads to more competitive behavior by individual negotiators (Ben-Yoav and Pruitt 1984; Mosterd and Rutte 2000; O'Connor 1997), we expect this mechanism to lead to lower group scores as soon as all negotiators are exposed to accountability. As a result,

negotiators will form coalitions that do not incorporate all negotiators, but rather a subset of the group.

By reaching an agreement that includes all negotiators that are present (a grand coalition), negotiators show that they care about group outcomes more than they do about individual outcomes. This is partly in line with what others have found; negotiators care about individual as well as group outcomes at the same time (Ben-Yoav and Pruitt 1984). However, under pressure of accountability, negotiators must choose between individual and group payoffs.

H_2: The presence of an accountability forum during negotiations will lead to fewer *grand* coalitions.

The increased efforts of players to reach an agreement but also to maximize pay-offs at the group and individual level, makes reaching an agreement that satisfies all negotiators more difficult. We expect that the number of defaults (no deal) will increase as a result of accountability, even in coalition negotiations (see Mosterd and Rutte 2000). When time is limited, negotiators are also forced to reach an agreement. Not reaching an agreement has no payoff.

In the public domain, there are often a limited number of alternatives for certain (policy) coalitions, which forces negotiators to cooperate. Further, as the number of people and thus interests expand vastly when negotiators are being held accountable the 'computational difficulty' of many viewpoints in the negotiation setting drives negotiators to opt for a solution that will yield more points at the individual level. Therefore, reaching a coalition - regardless of size and shape - is more attractive than defaulting. Because negotiators care about the group outcome (H2) but also compete as a result of accountability (H1) the frequency of defaults will increase (H3).

H_3: Holding negotiators accountable will lead to a higher chance of defaults (no deal) compared to non-accountable negotiators.

We expect that the *consequences* (sanctions or rewards) of accountability will have effects on negotiator behavior. The consequences define the relation between the forum and the negotiator. Public budgets are prioritized but rewards for good performance are not so common in the public domain (Verhoest et al. 2010, 143). Sanctioning poor performance is more a common practice. From this perspective, negotiators who are sanctioned are "poor performers."

H_4: Lower individual negotiation outcomes lead to a higher frequency of sanctions by an accountability forum.

We also expect that there is a link between the number of defaults (no deal) as a coalition outcome and the chances of a sanction. Poor negotiators will fail to order their preferences (especially given the presence of a forum) and therefore also fail to reach an agreement.

In terms of payoffs, not reaching an agreement can be viewed as the worst potential outcome for negotiators individually, but also at the level of the group. The payoff at the individual- and the group-level is zero in this scenario.

H_5: Not reaching an agreement (no deal) leads to a higher chance of facing negative consequences (sanctions).

METHOD

In this section, we set out the experiment that we carried out in order to test our hypotheses. First, we explain the setting and experimental context and participants. Next, we describe the design, the experimental procedure, the experimental conditions and the post-test questionnaire.

Experimental setting, context and participants

The hypotheses were tested in a campus-based, face-to-face experiment at a Dutch university. In total, we carried out two control sessions and three treatment sessions that were administered consecutively. All sessions were carried out on the same day and in the same classroom. Graduate and undergraduate student subjects were recruited from a course in a public administration program.

The participants were given a negotiation task that enabled us to examine the causal effect of accountability on negotiating a coalition. A face-to-face negotiation enhances the mundane reality for participants in the experiment (Bozeman and Scott 1992). A classroom setting gives the researcher situational control during the experiment (Morton and Williams 2010).

We asked the participants to negotiate a coalition in triads in a game that is best described as a coalition game in which utility is transferable (from hereon: coalition game) (Peleg & Sudhölter, 2007). Forming coalitions, while weighing individual and group pay-offs, is central to negotiation in both public and private sector settings (Lewicki, Barry, and Saunders 2015).

Rewards

The subjects were not financially compensated for participation as is customary in experimental economics (Charness and Kuhn 2011). Rather, the experiment was part of a public administration course and the negotiation was structured in such a manner that scores

could be compared after the experiment had ended. The student with the highest score was rewarded with a box of chocolates. This reflects that we have incentivized the participants to perform well on an individual level, which could only be achieved by striking a balance between individual and group interests.

Design

A between-subjects design was used. The independent variable (accountability) is manipulated in order to test its effect on the dependent variable (negotiation outcomes). We focused on two levels of negotiation outcomes. At the group-level we focused on group scores and the coalition type that was agreed upon whereas at the individual level, we focused on the individual scores as indicator for negotiator performance.

In the control condition, subjects played the coalition game in groups of three individuals. In the treatment condition, the subjects played the same game in the presence of a randomly matched viewer who acted as an accountability forum (see procedure section).

During the experiment, subjects played a coalition game. The task of the players was to form a coalition and to divide its value between or among its members. Different types of coalitions were worth points for the group of subjects. The goal for each player was to obtain the highest individual score possible. The negotiation itself centered around the division of points within the coalitions that were formed. In other words, the players could decide among each other, how they would divide the points that a certain coalition was worth.

The coalition game is denoted below. The value (v) of staying alone for players A, B and C is 0. The value of a coalition between A and B is 60, between A and C, 40, between B and C, 70, and the grand coalition among all players A, B and C gives a total value of 80.

$$\begin{aligned} v(A), v(B), v(C) &= 0 \\ v(A, B) &= 60 \\ v(A, C) &= 40 \\ v(B, C) &= 70 \\ v(A, B, C) &= 80 \end{aligned} \qquad (1)$$

Our coalition game is a variable-sum game, meaning that the sum of all players' payoff depended on their employed strategies. Further, the game has an infinite amount of solutions for the players (Telser 1994; Osborne and Rubinstein 1994, 257). Moreover, the core is empty.[7]

7 Proof that the core is empty (cf. Raiffa et al., 2002):

$$\begin{aligned} X_A + X_B &\geq v(AB) = 60 \\ X_A + X_C &\geq v(AC) = 40 \\ X_B + X_C &\geq v(BC) = 70 \\ \hline 2X_A + 2X_B + 2X_C &\geq 170 \\ X_A + X_B + X_C &\geq 85 \end{aligned}$$

(Core is empty because: $85 \geq X_A + X_B + X_C = 80$)

This means that the solutions, known as payoff vectors formed by the players are inherently unstable (Song and Panayides 2002; Parkhe 1993). For every solution the players agree on, there is another agreement that has a higher value (v) for at least one player. An illustration of this is when the value is evenly divided over players. The 'grand coalition' (1/3 of v(A, B, C) = 26.6) in this game results in fewer points for the individual players than the points a coalition between A and B will generate (1/2 of v(A, B) = 30) (for A and B, that is). Players may also choose to distribute points of this coalition differently, but always rounded off to 0.5 point.

Also, the players' positions differ in negotiation power. For this reason, the participants are rotated over the players' positions. Theoretically, player B is the strongest, followed by C and then A.[8]

Our experimental setting is an artificial situation, but is comparable to many negotiations in the public domain. In public negotiations, a single optimal solution does not exist due to a multitude of interests that also vary over time and space (Head 2008). There are different solutions that will satisfy actors in different configurations and require collective action (Van Bueren, Klijn, and Koppenjan 2003). Theoretically, players have an incentive to negotiate endlessly in this coalition game, as they will never reach a stable solution (Telser, 1994). Mundane deadlines or limited resources will then define the end of a negotiation. Think of policy targets or for example an ending financial year. For the same reason, a time limit ends negotiation rounds in this experiment.

Procedure

A pilot round with six subjects was administered before the final experiment took place. The pilot round led to improvement of the instructions and improved the relationship between the negotiator and viewer (forum) by adding green and red cards instead of written feedback.

During the experiment, randomization was ensured by letting the subjects draw from pre-printed number-cards that corresponded to the pre-numbered tables in the room upon entry to the classroom. When seated, the participants received an instruction sheet (See the appendices belonging to Chapter 4) and the instructions were read out aloud by the researcher. After questions of students had been answered, the negotiations began.

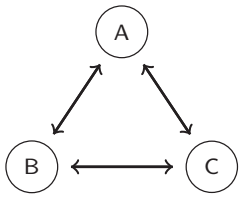


Figure 1: Negotiating a coalition in the control condition

8 Shapley values indicate the bargaining power of the players (Raiffa et al., 2002). Shapley-values for players: A = 20, B = 35, C = 25.

Following each negotiation round, the subjects had to note their individual scores and group scores on paper. In total, the participants played this game six times with rematches of players. For each of the six rounds, the subjects had five minutes time of 'play'. During the experiment, a time constraint ended the negotiation rounds (see figure 1). Finally, the subjects could ask questions and were extensively debriefed and informed about the purpose of the experiment.

Control condition

In the control condition, the subjects played the coalition game six times in total (see figure 2). After each round, the subjects were assigned a different position (A, B or C). After three rounds, the subjects were regrouped across tables.

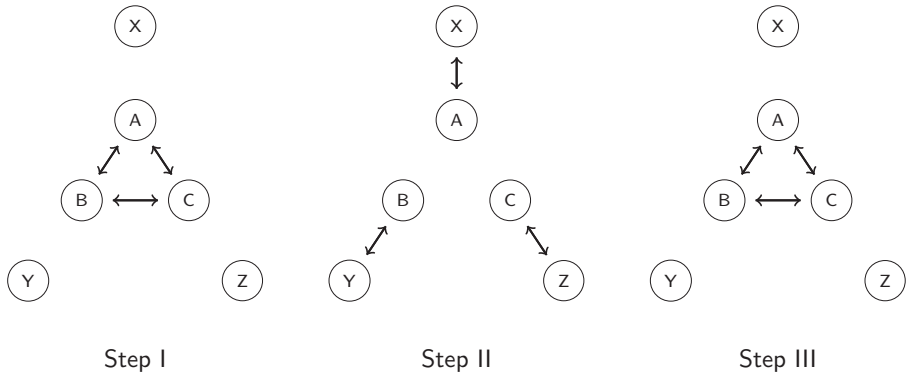


Figure 2: Negotiation a coalition in the treatment condition

Treatment condition

In the treatment condition, the subjects were matched in groups of three. There were negotiators and viewer roles. All negotiators in this condition played the role of negotiator as well as the viewer role. The negotiators played the same coalition game but now every negotiator had a viewer (a personal accountability forum) to which he/she had to report to. This viewer received 30% of the players' (A, B, C) points, which were not deducted from the players' total. Therefore, the viewer has an interest to give feedback and interfere with the process. The viewers watched the negotiation process and were allowed to give feedback at set instances. The responsibility for the negotiated outcomes remained with the players. All viewers and negotiators were able to see each other.

The coalition game was played for two minutes (Step I) (see figure 3). Then, the players had to report to their viewers. The viewers were allowed to react on the strategy, earnings and results of their negotiator only (one minute) (Step II). Then, A, B and C played for another three minutes (Step III). This process was repeated six times in total (see figure 3). In between,

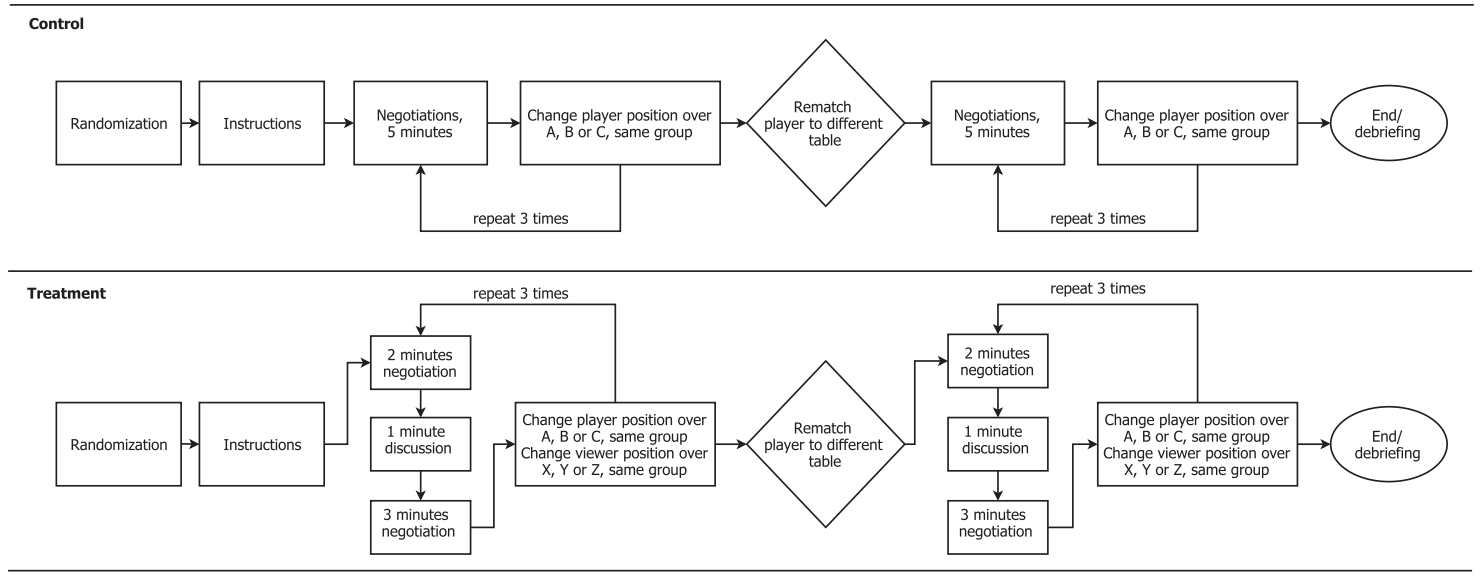


Figure 3: The Order of Events during the Experiment, Control, and Treatment Conditions.

negotiators and viewers were re-matched over the groups. The subjects were matched in such a manner, that they could never meet the same player and/or viewer for a second time. Like in the control condition, the participants were randomly assigned to different tables after three rounds.

When the negotiation round finished, the viewers had to 'pass judgment' (Bovens 2007) by giving either a green or a red card to his or her matched player (after Step III). In case of a green card, the player was allowed to keep the earned points.

A red card was a penalty for bad negotiation performance in the eyes of the viewer. Players that had received a red card had to subtract two points from their round-total. Potentially this could add up to a total of twelve points being subtracted from the players' total score.

Post-test

A paper-based questionnaire was administered after the experiment (see supplemental appendix B). This questionnaire contained questions on age, gender, public service motivation (PSM). We included these control variables as older individuals may have more negotiation experience. Also, negotiation literatures have established that men and women negotiate differently which stresses the importance of controlling for gender (Lewicki, Barry, and Saunders 2015). Additionally, we expect public administration students to have high public service motivation and as a result have high motivation to serve the public interest and high compassion levels (Vandenabeele 2008).

RESULTS

In total, 87 graduate and undergraduate students were recruited from a public administration course from which 27 served as control and 60 served as treatment. There were 19 groups in total with nine groups in the control condition and ten groups in the treatment condition. The results from one group were excluded from analysis because of unreadable handwriting and calculation errors of the participants. All groups negotiated six times (for five minutes) which yielded 114 negotiated coalition outcomes (54 in control and 60 in treatment).

Age and gender did not differ over treatment and control. The highest level of education differed over the conditions (see table 1). For this reason, the background variables are used as control in further analyses. The descriptive results also confirm that the student subjects are good proxies for civil servants as their public service motivation is relatively high (Leisink and Steijn 2009). The 10-item Dutch PSM scale had moderate reliability (Cronbach's alpha = .60).

A post-hoc power test for unequal sample sizes revealed that on the basis of the means, the statistical power in this study is .97 (α=.05, df=17, N=10/9, d=1.88), which is more than the recommended statistical power of .80 (Cohen 1988).

Table 1: Descriptive statistics (n=87) (SD in parentheses).

	% Female	Average age	Education	PSM
No accountability (control)	41.4%	21.81 (1.798)	5.76 (0.812)	3.46 (0.367)
Accountability (treatment)	25.7%	20.91 (2.485)	5.33 (0.705)	3.32 (0.424)
Overall mean	33.3%	21.19 (2.321)	5.46 (0.759)	3.37 (0.410)
Test statistic	$\chi^2 = 1.510$, $p = 0.219$	t-test = 1.903 $p = 0.061$	wilcox-w= 1040.5 $p = 0.011$	t-test = 1.56 $p = 0.123$

Accountable Negotiators Will Show Lower Performance at the Group-Level than Non-Accountable Negotiators.

The first hypothesis is supported by our data. Triads of players that are in the control condition obtained higher group scores (Mcontrol = 464.44, SD = 27.43) than did the triads in the treatment condition (Mtreatment = 374.75, SD = 61.44). Figure 4 shows the average total scores of the groups over the entire experiment. The development of the scores over time per round can be found in supplemental appendix C.

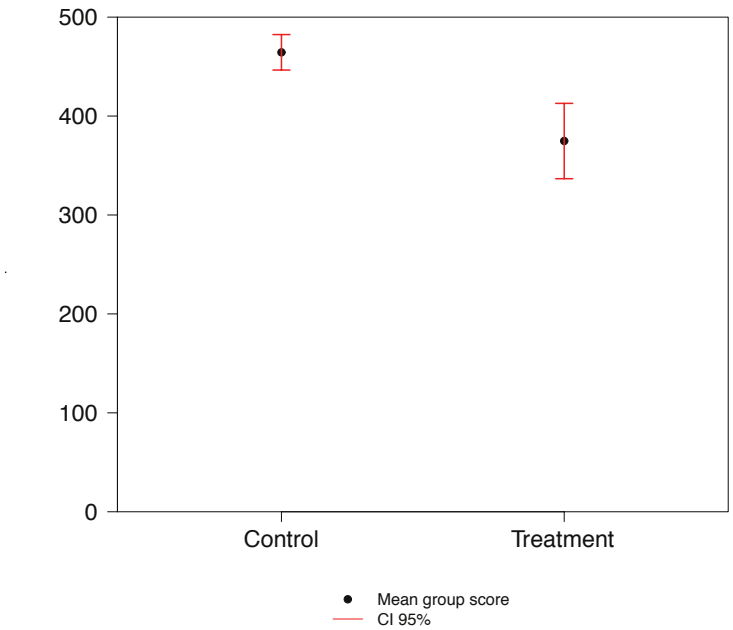


Figure 4: Average group scores over the entire experiment.

As the scores at the group level are not parametric, a Wilcoxon-ranked-sum test is suitable (Siegel and Castellan 1988). The differences between control and treatment are statistically significant (w = 83.5, p = .0017).

Groups scores, and thus solutions, in the accountability condition are more different from each other than they are in the control condition. This is also confirmed when testing the second hypothesis.

The Presence of an Accountability Forum During Negotiations Will Lead to Fewer Grand Coalitions.

The second hypothesis is also supported by the data. The negotiators in the accountability condition were less inclined to reach the 'grand coalition' (table 2). The grand coalition (ABC) occurred in 88.9% of instances in the control condition, whereas it occurred in 36.7% in the treatment condition.

Table 2: Frequency of coalitions by condition

	No accountability Control	Accountability Treatment	Test statistic
AB	1.9% (1)	15.0% (9)	
AC	1.9% (1)	16.7% (10)	
BC	7.4% (4)	25.0% (15)	
ABC	88.9% (48)	36.7% (22)	
No coalition	0.0% (0)	6.7% (4)	
	100% (54)	100% (60)	$X^2 = 33.56$, $p < .000$

Holding Negotiators Accountable Will Lead to a Higher Frequency of Defaults (No Deal) Compared to Non-Accountable Players.

The third hypothesis is also supported by the data. Indeed, subjects in the accountability condition show a 6.7 percent rate of defaults, whereas the subjects in the control condition always reached an agreement (see table 2). As players were always able to reach an agreement in the control condition, and only in four cases did not reach an agreement in the treatment condition, the results are statistically significant. Although absolute numbers are only small, the point-wise attractiveness of reaching a coalition outcome (whichever combination of players) is expected to always generate a coalition outcome of some sort.

Lower Individual Scores Lead to More Sanctions by an Accountability Forum.

Analyzing the results for the fourth hypothesis demands that we focus on the effects within the accountability condition only. Therefore, the results from this part of our analysis are of a correlational nature. In total, a red card was given to negotiators in 30.5% of all opportunities to do so by the viewers.

Based on the data we conclude that a lower score predicts a sanction at the group-level (see table 3). Note that the betas represent the scores over the length of the experiment (i.e. earning 90.9 points less resulted in one sanction - or 15.15 fewer points leads to a sanction per round on average). The second model adds the covariates age, gender and public service motivation. The covariates have no effect on the relationship between individual scores and sanctions.

Table 3: (OLS) Predicting sanctions under the effect of accountability (SE in parentheses)

	Model I	**Model II**	**Model III**
Constant	1.174***	0.585	1.168
	(0.199)	(0.943)	(1.381)
Score	-0.011***	-0.011***	-0.011***
	(0.003)	(0.003)	(0.003)
Age		0.015	-0.012
		(0.032)	(0.054)
Male		-0.162	-0.185
		(0.186)	(0.193)
PSM		0.115	0.137
		(0.188)	(0.195)
Education (secondary school)			-0.119
			(0.628)
Education (applied university)			0.018
			(0.706)
Education (college level BA/MA)			0.165
			(0.689)
N	53	53	53
R^2	0.215	0.237	0.250
Adjusted R^2	0.200	0.173	0.133
Residual Std. Error	0.572 (df = 51)	0.581 (df = 48)	0.595 (df = 45)
F Statistic	14.007*** (df = 1; 51)	3.726** (df = 4; 48)	2.142* (df = 7; 45)
AIC	95.09	99.62	104.71
Durbinson-Watson (1 > criterion < 3)	1.81	1.83	1.84

Note: ***p < .01; **p < .05; *p < .1
No VIF values <10 and average close to 1), Cooks-d, all <.4, Normality of errors and heteroskedasticity met.

Additionally, a lagged linear regression was calculated in which the sanctions were used as predictor for each round t+1. A sanction in round one would predict scores in round two, a sanction in round two predicts the scores in round three and so on. Sanctions in the previous round did not significantly predict performance, $R^2 = .00$, $F(1, 143) = 0.36$, $p = .545$. There is no carry-over effect between subsequent negotiations.

Not Reaching an Agreement (No Deal) Leads to a Higher Chance of Facing Negative Consequences (Sanctions).

The fifth hypothesis is not supported by the data. Based on the frequency of the sanctions, the grand coalition (A, B and C) led to a sanction in 11.3% of the cases. In 17.3% of cases, a dyadic agreement resulted in a sanction for players. Not reaching an agreement at all led to a sanction in 33.3% of cases.

A pooled binomial logistic regression analysis was calculated using the coalitions as predictors for sanctions (sanction or no sanction) (table 4). The grand coalition is used as reference category (most occurring). Not reaching an agreement significantly predicts the odds of receiving a sanction (odds ratio = 3.93, 95% confidence interval, 1.04-14.87, p = 0.043). Put differently, not reaching an agreement is associated with a 79.7 percentage point higher chance of receiving a sanction (compared to reaching an agreement). At the same time reaching a dyadic coalition (AC) is significantly associated with a 75.45 percentage point higher chance of receiving a sanction. As the AC coalition is also associated with sanctions and the model quality is not satisfactory, (i.e. high AIC and low pseudo-R^2) we decided to reject the fifth hypothesis.

Table 4: (Binomial Logistic Regression) Predicting sanctions from coalition type (SE in parentheses)

	Model I	**Model II**	**Model III**
Constant	-2.061***	-2.906	-5.091
	(0.401)	(2.546)	(3.803)
No coalition	1.368**	1.324*	1.237*
	(0.679)	(0.687)	(0.700)
AB	-0.241	-0.331	-0.391
	(0.843)	(0.853)	(0.857)
AC	1.123**	1.004*	1.031*
	(0.562)	(0.574)	(0.590)
BC	0.174	0.062	0.154
	(0.626)	(0.634)	(0.645)
Age		-0.035	0.104
		(0.090)	(0.156)
Male		0.616	0.629
		(0.545)	(0.550)
PSM		0.353	0.307
		(0.510)	(0.522)
Education (secondary school)			-0.377
			(1.315)
Education (applied university)			-0.943
			(1.642)
Education (college level BA/MA)			-2.335
			(1.790)
N	169	169	169
Log Likelihood	-71.916	-70.964	-69.314
AIC	153.832	157.929	160.629
Hosmer and Lemeshow R^2	0.052	0.056	0.086
Cox and Snell R^2	0.046	0.056	0.075
Nagelkerke R^2	0.077	0.095	0.126
% correct predicted	28.1	28.2	28.5

Note: ***p < .01; **p < .05; *p < .1

DISCUSSION

Many NPM public-sector reforms hinge on the idea that public accountability increases public performance (Bovens, Schillemans, and 't Hart 2008). Dubnick (2005) notes that empirical tests of the link between public accountability and performance are scarce. Moreover, decisions are increasingly taken by means of negotiations in governance networks while public accountability structures have not adapted to these newer forms of decision making.

Our experiment consistently shows that public accountability leads to different coalitions and more no-deals. The group-level payoffs seem to be prioritized when negotiators are not held accountable. Conversely, when negotiators are held accountable, individual payoffs seem to be prioritized. Although the data do not allow us to make causal claims on the sanction part of the experiment, the results suggest that sanctions have a small, or no effect on subsequent negotiations. Our findings have implications for public accountability as well as for coalition negotiations in the public sector.

Public accountability

Our main finding is that group level performance of negotiators is reduced by public accountability. In our experiment, individual negotiators were held accountable for their actions. A question remains whether performance of organizations instead of individual negotiators would also be lowered by public accountability. This question is relevant as individual negotiators may be held accountable by their superiors, while the organization they represent will be held accountable by a political forum or citizens.

In our experiment, the viewers were instructed to rate their negotiators. If the goal of public accountability is to increase performance, the accountability structure may need to focus more on process rather than output. Similarly, if including all actors in a coalition is a goal, viewers may need more precise process benchmarks instead of just rating their negotiators.

Despite that our negotiation setting is a low stakes game for the players, the viewers indeed sanctioned poor performers while these sanctions as such seem to have no effect at all on the future negotiations of the sanctioned. Although these findings are preliminary, they imply that accountability fora do indeed sanction poor performance but the sanctions as such do not impact the future behavior of organizations. Additionally, the worst performing negotiators are not sanctioned hard. This may point to effects of social reciprocity between actor and forum.

Public negotiations

Public organizations are increasingly held accountable by citizens. In our experiment, negotiators seem to focus on including all players as much as possible. As negotiators knew beforehand that they would negotiate in multiple rounds, the focus on the group could

be a result of *forward induction*. This does not explain the higher number of no-deals when negotiators are held accountable. Our findings also provide some support for the idea that negotiations behind closed doors may result in better group outcomes than negotiations that are subject to public accountability (Chambers 2004).

Also, it seems that a focus on accountability of the output reduces the attention of negotiators to the results at the group level. Negotiation results in the public sector are frequently about the group level or even about generating a public good.

For practitioners, there are a number of relevant takeaways. Negotiators should pay specific attention to payoffs of parties at the group *and* individual level when parties are expected to be held accountable. Practitioners should expect that negotiators are more likely to form smaller coalitions. The consequences of public accountability – such as sanctions – have little effect on future negotiations.

Limitations

Finally, we discuss some limitations and avenues for further research, before final conclusions can be drawn from our study. A first limitation is that we have employed student subjects in our experiment. This raises the question whether public servants that negotiate a coalition would respond in a similar fashion. The use of student-based samples in experimental research has been criticized because for their limited statistical generalizability (see for an overview: Morton and Williams 2010; Charness and Kuhn 2011). Psychologists and behavioral economists are struggling with the question of when and how using students in experiments is appropriate (Druckman and Kam 2011; Charness and Kuhn 2011; Open Science Collaboration 2015). In public administration, there is no real consensus on this matter but a substantial share of experimental studies in public administration make use of student participants (Li and Van Ryzin 2017; Bouwman and Grimmelikhuijsen 2016). Our study focuses on behavior of individuals in negotiations and groups of individuals at the psychological micro-level of aggregation (Tepe and Prokop 2017; Meijer and Funk 2017; Grimmelikhuijsen et al. 2016). Using students creates a problem especially when "the treatment effect is moderated and the moderating variable varies between students and nonstudent samples" (Druckman and Kam 2011; Tepe and Prokop 2017). Also, distinctive characteristics of students such as a relatively low age and higher education, compared to practitioners, could influence our findings.

Second, a face-to-face negotiation is more realistic to subjects, compared to computerized laboratory negotiation settings and therefore has higher ecological validity, but does introduce the risk of exogenous (confounding) influences, such as social effects of liking or body language of the participants. The participants in our experiment could see each other, and possibly knew each other beforehand. Despite randomization, some familiarity with one another might have biased the results. Additionally, experimenter demand effects may have influenced the findings. This is a trade-off between mundane realism (Bozeman and Scott

1992) on the one and experimental control on the other hand. The choice for a face-to-face experiment is partly legitimized by the fact that negotiations are most often a face-to-face activity and that negotiators and an accountability forum may also know each other.

Third, in our study, negotiators and viewers switched roles for practical reasons while in the public domain, the role of viewer and negotiator will be more stable over time. More research is needed to study the repeated and asymmetric character of the relation between actor and forum, in which for example building trust or familiarity could play a moderating role.

The viewer in our study obtained 30% of payoffs of the negotiators. Varying on this strength, i.e. setting the payoff for the viewer at 10% or 60% may provide insight in how the relation between forum and negotiator works. Unfortunately, our data do not enable us to answer to what extent individual negotiator payoffs under public accountability pressure are conditional on the group results.

Replication

Future research efforts should be aimed at replicating this study in different settings by using different types of experimental designs like a computerized experiment that strips off more context for higher internal validity. Alternatively, a field experiment with practitioners that focuses on the link between public accountability and negotiator or organizational performance seems a good step forward to see how our findings travel to more context rich environments.

Public and private sector negotiations

Another promising way forward would be to study differences between public sector and private sector negotiators in their responses to accountability. Accountability in the public sector is more stringent compared to the private sector, especially with regard to processes and general policy (Mulgan 2000). Moreover, public and private sector employees seem to differ consistently in some personality characteristics like compassion, self-sacrifice, altruism and risk-perceptions (Perry and Wise 1990; Vandenabeele 2007; Wildavsky and Dake 1990). The differences specific characteristics may play an important role in negotiations as well.

CONCLUSION

Our study makes two important contributions to the literature. First, this paper brings together accountability and negotiation literature in the public domain, which has not been done before to our knowledge.[9]

9 There are studies in International Relations that focus on the related concept of transparency and negotiations (eg. Stasavage, 2004).

Second, accountability scholars have suggested to use experiments to test the impact of accountability on public sector organizations and employees (Koch and Wüstemann 2014). By using a face-to-face negotiation experiment, we balanced between high internal validity of the study and reasonable reality for the participants. While acknowledging that further refinements are necessary, we have made an important first step in studying effects of accountability on public negotiators by means of an experimental design.

In line with earlier studies on negotiations, we found that public accountability leads to lower performance in negotiations at the group level (see table 5) (Klimoski 1972; O'Connor 1997). This is an important finding as negotiating a coalition differs in many respects from simpler dyadic bargaining settings that are often used in experiments (Stevenson, Pearce and Porter 1986; Murninghan 1986; Lewicki, Saunders, and Barry 2015).

Table 5: Summary of findings

	Hypothesis	**Findings**
H1	Accountable negotiators will show lower performance at the group-level than non-accountable negotiators	Supported
H2	The presence of an accountability forum during negotiations will lead to fewer grand coalitions.	Supported
H3	Holding negotiators accountable will lead to a higher chance of defaults (no deal) compared to non-accountable negotiators.	Supported
H4	Lower individual negotiation outcomes lead to a higher frequency of sanctions by an accountability forum	Supported
H5	Not reaching an agreement (no deal) leads to a higher chance of facing negative consequences (sanctions)	Refuted

Next to lower performance, the frequency in which negotiators reached a *grand coalition* was reduced under the influence of accountability in our experiment. Recent research found that civil servants as well as public administration students are relatively cooperative in a range of settings (Esteve, van Witteloostuijn, and Boyne 2015). This may partly explain the high number of grand coalitions in the control condition. Within the accountability treatment, our finding seems to suggest that negotiators opt for higher individual payoffs at the cost of cooperation with all negotiators.

Further, accountability led negotiators to not reach any agreement at all. When an agreement was reached, it appears that negotiators focused on smaller coalitions and higher individual results instead of group results. This finding is particularly interesting as the size of the sanctions in our experiment was limited in size and the experimental game was a low-stakes setting. One should interpret this finding with caution: time pressure in general seems to produce non-agreements in negotiations (Mosterd and Rutte 2000; Carnevale and Lawler 1986).

When focusing on only the treatment condition and using cross sectional data, we found that poorer performing negotiators received more sanctions from their accountability forum. Also, sanctions did not improve performance in subsequent negotiation rounds.

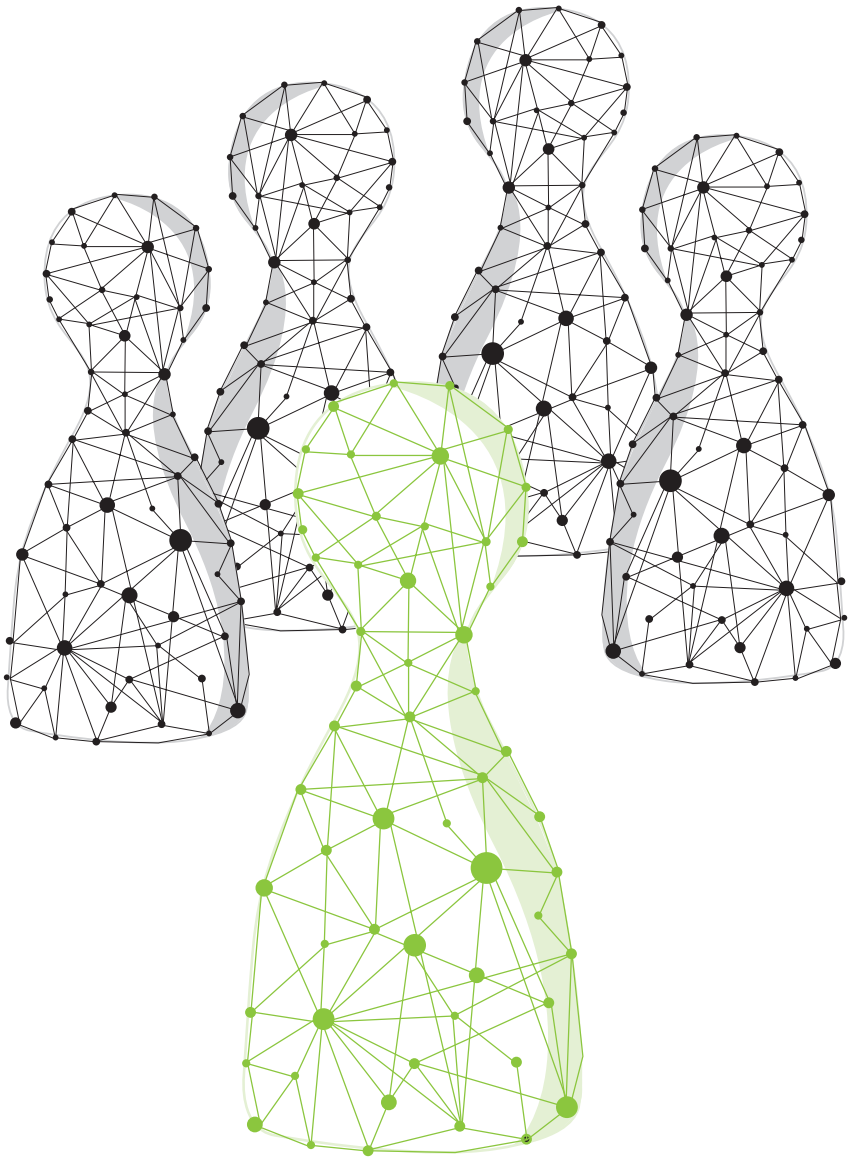
Accountability is claimed to reduce corruption, increase trust and performance. We contribute to the so far inconclusive theoretical discussion on the effect of accountability in public sector by providing empirical evidence that public accountability leads to different coalitions and lower group outcomes in negotiations. Our findings underscore that adverse effects of public accountability on individual and group outcomes as well as organizational performance should not be overlooked.

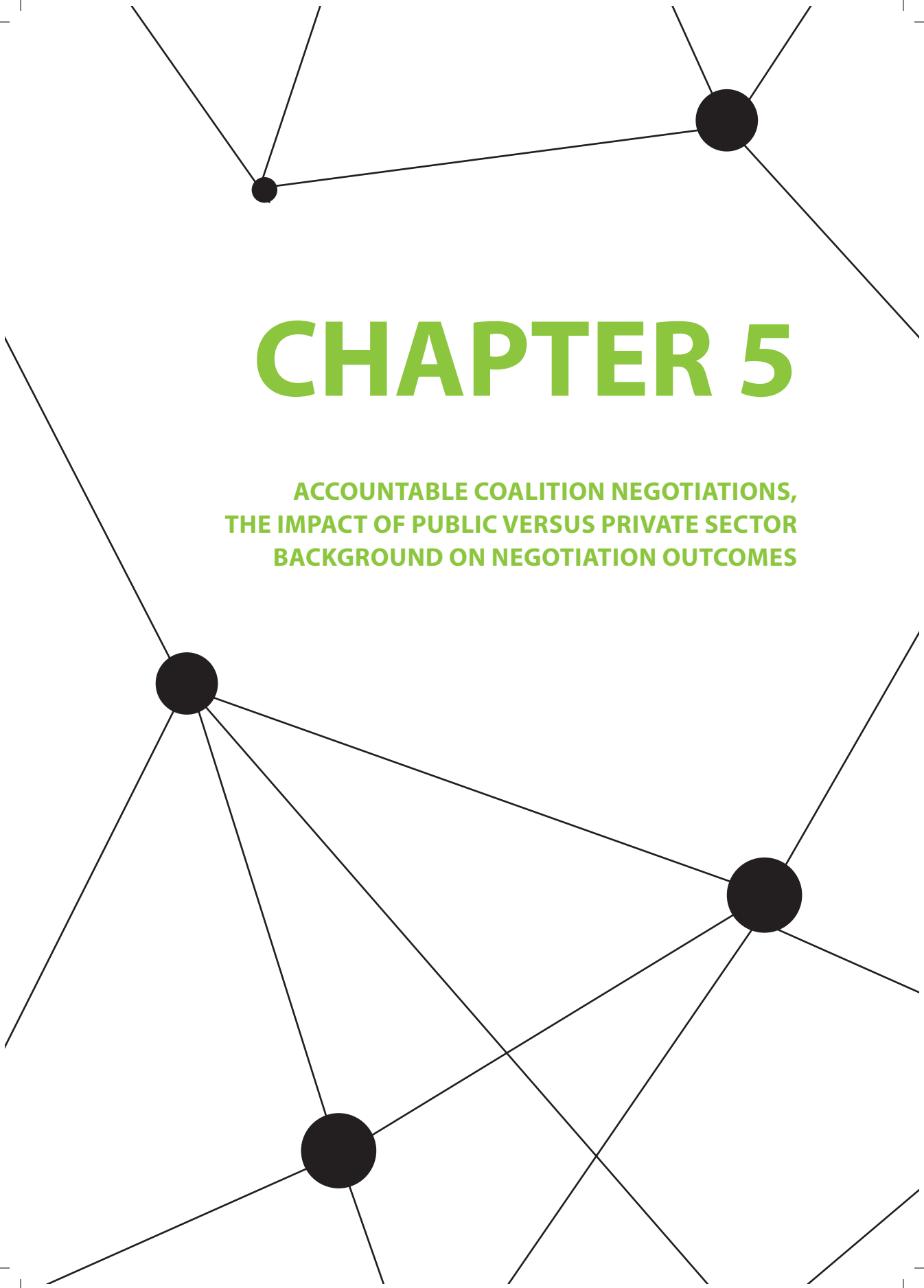
Funding

This work is financed by the Netherlands Organization for Scientific Research (NWO), Research Talent Grant 406-13-021.

Acknowledgements

We thank Gregg Van Ryzin, Rick Feiock, Jim Perry and two anonymous reviewers whose comments have helped greatly to improve the paper.





CHAPTER 5

ACCOUNTABLE COALITION NEGOTIATIONS, THE IMPACT OF PUBLIC VERSUS PRIVATE SECTOR BACKGROUND ON NEGOTIATION OUTCOMES

ABSTRACT

Forming coalitions by means of negotiations are an important form of decision-making. Meanwhile accountability demands have increased in the public- and private sector. Earlier work has shown that accountability has a negative effect on negotiation outcomes. As public sector workers value accountability more than private sector workers, we investigate if the effects of accountability on negotiation outcomes differ for public and private sector-oriented individuals.

We tested the effect of accountability (present versus absent) on forming a coalition by using a between-subjects-design negotiation experiment. A mix of graduate and undergraduate students were asked to negotiate a coalition in triads. The students represented either public or private sector negotiators, based on their level of Public Service Motivation.

The results show that accountability lowers group and individual performance in coalition negotiations. Contrary to our expectations, behavior did not differ between public and private sector negotiators. The paper concludes with some implications and a research agenda.

This chapter is currently under review in an international peer reviewed journal.

INTRODUCTION

In this study we test the effect of accountability on forming coalitions by two types of negotiators: those with preferences and motives oriented towards the public sector and those who have preferences and motives oriented towards the private sector. There are five main reasons why this is important.

First, negotiations are a core activity in the private sector but also in public sector organizations. Politicians determine who gets what, when and how by negotiating over scarce assets (Lasswell, 1936). Public servants involved in the implementation of policies, production and delivery of public goods, services and provisions have to deal with negotiations. Negotiation is mentioned in the policy network literature (e.g. Klijn & Koppenjan, 2012) and coproduction literature (e.g. Fenwick, 2012; Needham, 2008) as an important tool for achieving policy results. Yet, there is a great lack of research in public administration into the processes and mechanisms and outcomes of the actual negotiations (see for some exceptions Medda, 2007; Perry & Angle, 1979; Torenvlied & Akkerman, 2004).

Second, negotiation literature does not distinguish between the public and private sector even though there are some notable differences between individual characteristics and values of public- versus private sector employees that have a potential impact on negotiation behavior. For example, public sector workers behave more cooperatively compared to private sector workers (e.g. Esteve, Urbig, Van Witteloostuijn, & Boyne, 2016; Esteve, van Witteloostuijn, & Boyne, 2015) and are more risk averse (Buurman et al., 2012; Wildavsky & Dake, 1990).

Third, negotiations by public servants and private sector negotiators, are usually carried out in name of 'others'. In the public sector, the 'others' are beneficiaries: a distal public good or citizens as a whole while in the private sector, negotiations are carried out in name of a commercial company, which may have shareholders. Empirical research shows that ownership matters for individual motives and behavior (Andersen, Pallesen, & Pedersen, 2011).

Fourth, in both the public and private sector, negotiators are held accountable in fora. Accountability is often considered to be a cornerstone of modern democracies in the public sector (Mulgan, 2000b). Accountability demands for the public sector have increased over the years (Bovens, Goodin, & Schillemans, 2014; Power, 1994). Increasingly, citizens and clients demand that their governments are accountable to them – directly or via political representation (Ibid.). In the private sector, accountability varies more with organizational size and company type, but is thought to be more focused on financial results (Mulgan, 2000b). Despite that public accountability is considered to be relevant to both the public and private sector, public servants mention accountability as the most important public value in their work (Van der Wal et al., 2008, p. 476).

Fifth, although accountability is rated as one of the most important values in the public and private sector, and that negotiation is central to many decisions, surprisingly little is known about the relation between accountability and negotiation outcomes. The effects of

secrecy on decisions and deliberation - the opposite of accountability - have been better documented (Chambers, 2004).
For example, when teams are held accountable, the members distribute the responsibility for the results (O'Connor, 1997). Moreover, when negotiators expect to be held accountable (but are not actually held accountable), they act more combatively, by making larger claims and fewer concessions (Ben-Yoav & Pruitt, 1984).

Despite positive claims about the effects of accountability, such as increased performance, higher trust and lower corruption, a recent study found that imposing public accountability on negotiators strongly lowers negotiation outcomes for public sector negotiators (Bouwman, van Thiel, van Deemen, & Rouwette, 2018a). Accountability led negotiators to form smaller coalitions, which included fewer parties, while a higher number of no deals occurred. Also, accountable negotiators decided to divide fewer points, signifying negotiation outcomes and therefore performed less than non-accountable negotiators.

Summing up, negotiating is a core activity in the public- and private sector and there are significant differences in behavior between public and private negotiators, but the topic is somewhat neglected in public administration literature. Negotiation literature focuses more on the process and outcomes of negotiations but does not distinguish between the public and private sector. The limited literature available points to an important role of accountability. Accountability is thought to be essential by workers in the private sector, and even more so in the public sector (Van der Wal et al., 2008).
As public and private sector workers are different in attitudes (Liu & Perry, 2014), motivation (Coursey & Pandey, 2007; Vandenabeele, 2007) and decision behavior (Esteve et al., 2016; Van Witteloostuijn et al., 2017), it is plausible that they will respond dissimilar when exposed to accountability. Our main research question therefore is: *Are responses to accountability different for public/private sector negotiators?*

To answer this question, we test if responses to accountability differ for public- and private sector negotiators. This is done in an experiment that is similar to the one by Bouwman et al. (2018a), but we add to the design two 'types' of backgrounds: people oriented towards the public sector, and people more oriented toward the private sector, based on their Public Service Motivation. In doing so, we contribute to both the negotiation and accountability literature in the public sector. Also, we respond to calls for more experimental studies into the effects of accountability (Koch & Wüstemann, 2014). Finally, we contribute to the stream of behavioral public administration literature by combining psychological insights on characteristics and behavior of public servants with public administration research practice (Grimmelikhuijsen et al., 2017).

The following section outlines the article's theoretical approach and develops the two hypotheses that will be tested. Next, we discuss the experimental design, the participants, the setting and negotiation game. Lastly, we discuss the findings, and their implications for theory and practice.

THEORY

In this section, we discuss coalition negotiations, public accountability and differences between public and private sector negotiators. The theory informs the two hypotheses that are to be tested in our experiment.

Negotiating coalitions

Negotiation is defined as: 'the process of back-and-forth communication aimed at reaching agreement with others when some of your interests are shared and some are opposed' (Ury, 1993, p. 4). The outcomes of negotiations are determined by the fact that negotiators are interdependent (Lewicki et al., 2015, p. 9). In other words, for negotiators to reach their individual goals, they need each other.

It is typical for negotiations that there are two or more people involved. Those people have a conflict of needs and desires and they negotiate by choice. A give and take process can be expected. People prefer to negotiate and search for alternatives rather than to struggle or fight publicly. Negotiation involves the management of tangibles (prices or terms) and intangibles (like the need to win or avoid losses and the need to obtain or keep a good reputation) (Lewicki et al., 2015).

This study focuses on coalitions as the outcome of negotiations (eg. van Deemen, 2013). Coalitions come in different forms and sizes. Coalitions are defined as: 'a collection of parties within a larger social setting who work together to pursue mutually desirable goals' (Guo & Lim, 2007; Murninghan, 1986). Coalitions are interacting groups of people. They are deliberately constructed and issue oriented. Coalitions exist independent of a formal structure. Coalitions focus on goals external to the coalition. Finally, coalitions require joint action of their members (Lewicki et al., 2015; Stevenson, Pearce, & Porter, 1985). Central in formed and pending coalitions is that the negotiators care about the outcomes (O'Connor, 1997, p. 386) as these contribute to their own, individual goals. However, other parties may have an interest as well.

In the public domain, such other parties are for example interest groups and citizens. Also, it should be noted that in case civil servants negotiate, they do so in the interest of the public good - and it is the politicians who are usually held accountable. In the private sector shareholders (owners) will be interested in the outcomes as well.

Accountability

Accountability is often considered to be a cornerstone of modern democracies. Public organizations are held accountable for how public means are used or to what extent intended policy goals are achieved. Organizations are 'audited' by their ultimate owners - citizens - via mechanisms of accountability such as elections.

Many definitions of accountability exist, and the precision of the definitions is heavily debated (Mulgan, 2000b). However, most definitions involve a relation of responsibility where one person or body is responsible to the other (Ibid). In this study, we define accountability as 'a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct. The forum can pose questions and pass judgment, and the actor may face consequences' (Bovens, 2006, p. 7).

The consequences of accountability come in the form of sanctions or rewards (Mulgan, 2000a). In public sector organizations, the relationship between the actor and forum is usually defined by law. While accountability may have observable impact on behavior, it is especially the *expectation* to be held accountable by actors - and to face consequences imposed by a forum - that steers actual behavior (O'Connor, 1997).

Increasingly, public- and private organizations are expected to provide information to stakeholders and shareholders about their results (Olsen, 2015). Municipalities, schools, hospitals and companies are all increasingly required to be accountable about their output, procedures and results. The growth of accountability demands on both the public- and private sector has altered the way organizations work (Power, 1994, 2000, 2005). For example, New Public Management reforms and decentralizations have re-allocated formal responsibility from national governments to agencies (Hood, 2000). The increase in measurement of output of governments and agencies has a number of unintended ramifications (cf. Thiel & Leeuw, 2002). For example: citizens are sometimes unable to correctly assign the responsibility for the outcome of certain policies because they are unsure who exactly must be held accountable (León, 2018).

Some authors point out that the increase in accountability demands has led to undesirable side effects that can be sorted into two categories: deficits and overloads (Bovens et al., 2008). For example, performance data can be presented in the most favorable way by excluding underperforming governmental units (Wolf. de & Janssens, 2007). Task-overload refers to the amount of accountability demands placed on organizations, leaving less and less time for primary tasks (Bovens et al., 2008).

Accountable public and private negotiators

Negotiations do not necessarily benefit from more accountability (Kramer, Pommerenke, & Newton, 1993). For example, despite the societal call for more and more accountable public- and private organizations, a central criterion for negotiations in the context of international relations to succeed is that they happen 'behind closed doors' (Chambers, 2004). In other words,

some level of secrecy is needed for negotiations to succeed. When audiences are present, they usually insist that negotiators behave tough (Lewicki et al., 2015). Empirical studies frequently find that negotiators who are being held accountable behave more dominantly or competitively as they are less willing to make concessions (Klimoski, 1972; O'Connor, 1997).

In turn, this could lead to higher individual gains, compared to non-accountable negotiators, and lower group gains on average (O'Connor, 1997; Pruitt et al., 1978). If mechanisms of accountability lead to competitive rather than problem-solving behavior, it becomes more difficult to reach agreement. This is especially the case in potential coalitions that aim to solve issues by negotiating an agreement. Accountability will lead to more competitive behavior during negotiations because negotiators will feel the social need to do better for their 'forum' (cf. O'Connor, 1997), or they may fear the consequences of bad performance (Bovens, 2006). As a result, we expect that accountable negotiators behave more competitive, leading to lowered performance (Bouwman et al., 2018a).

H_1: Compared to non-accountable negotiators, accountable negotiators will perform lower in forming coalitions.

Public- and private sector negotiators may have different expectations when they are held accountable for their negotiation results. Van der Wal et al. (2008) found that both public- and private sector employees place emphasis on accountability in their work but public-sector workers find it a more important value. The negative effect of accountability on negotiation performance could therefore be stronger for public sector negotiators than for private sector negotiators.

Moreover, public- and private sector employees differ in work motives (Perry & Wise, 1990; Vandenabeele, 2008) and risk propensity (Buurman et al., 2012; Pfeifer, 2011). When placed in the same situation, public and private sector employees behave differently, in a range of different settings and tasks (e.g. Belle, 2013; Brewer & Brewer, 2011). For example, Esteve et al. (2016) show that individuals with higher public service motivation - a set of motives that are typical for public servants - are more likely to cooperate. Similarly, federal public sector workers are likely to whistle blow as a result of their motivation for the public interest, job commitment and job satisfaction (Brewer & Selden, 1998).

Traditionally, who fits the categorizations of public- and private sector workers has been the focal point of debate (Bozeman, 2004). Clustering individuals based on the sector in which they work assumes that people are either oriented towards the public or private sector. In practice, semi-public organizations, quango's and commercial companies with a societal aim are a relevant category that can be placed halfway between these extremes.

We will use the concept of public service motivation (PSM) for measuring individuals' predisposition towards the public sector (Perry, 1996; Vandenabeele, 2007). Public service motivation aims to measure the motivation that individuals have to contribute to society

(Perry & Hondeghem, 2008). As a consequence, PSM is particularly useful in distinguishing public sector employees from private sector employees. Originally, the concept of PSM was developed using students and has later been extended to employees (Perry, 1996). Still, empirical studies show that both students and practitioners differ on PSM based on the sectors or study programs they reside in. For example: students enrolled in public administration and political science programs have higher levels of PSM on average, compared to students enrolled in economics and business administration programs (Tepe & Vanhuysse, 2017; Vandenabeele, 2008). Compared to a distinction based on sector, PSM is arguably a better measure of 'publicness' as it allows for a more fine-grained distinction between the extremes of individuals' orientation towards the public and private sector. Additionally, a distinction based on measured motives instead of sector fits well with the behavioral public administration stream, that aims to use psychological insights in the realm of the public sector (Grimmelikhuijsen et al., 2017).

In sum, public- and private sector employees respond differently to similar situations, and public sector employees will consider accountability as a more important value. Based on this, we expect the negative effect of accountability on performance to be stronger for public sector employees than for private sector employees.

H_2: The adverse effect of accountability on forming coalitions through negotiations is stronger for public sector negotiators compared to private sector negotiators.

METHOD

In this section we describe the experiment that was carried out to test our hypotheses. First, we explain the context, the participants and the experimental design. Then we describe the experimental procedure, the experimental conditions and the post-test questionnaire.

Context, participants and experimental design

Our experiment is a face-to-face negotiation setting. For the experiment we used a classroom with arranged numbered tables and chairs. In the classroom, subjects were asked to negotiate a coalition in triads in a coalition game (see experimental design section).

Our experiment is a factorial, between-subjects design. In the experiment, we manipulated accountability to test the effect on negotiating a coalition. We used the same experiment as Bouwman et al. (Bouwman et al., 2018a) with one addition: we measure the participants' public service motivation as we expect differences between individuals oriented to the public sector versus individuals with motives oriented towards the private sector. In order to assess differences, we recruit graduate and undergraduate students enrolled in public administration and business administration programs at the same university (see table

1). Based on students' self-selection into study programs, we will obtain a reasonably diverse sample in terms of public service motivation (Delfgaauw & Dur, 2010).

Table 1: Experimental factors.

No accountability & Low PSM	Accountability & Low PSM
No accountability & High PSM	Accountability & High PSM

As in the original study by Bouwman et al. (2018a), the focus is on both individual and group-level outcomes. There was a total of eight sessions on two different days in May 2015 and January 2016. The data on public administration students was collected first in five sessions. On the second day, the data on business administration students was collected in three sessions. The data from the two days were combined for a cross-sample comparison.

There are two experimental conditions. In the control condition, subjects play the negotiation game in groups of three. In the treatment condition, the subjects play the same game but are accountable to a viewer (one per negotiator). During the experiment, subjects played a coalition game (cf. Song & Panayides, 2002). The aim of this negotiation game is to form a coalition. Every coalition is worth points for the group of negotiators, which must be divided among the individual players. The goal for players is to obtain the highest individual score possible (there is no reward as this is a classroom experiment, see also below). The players negotiate how to divide the total points is to be divided over the players. The total value and boundaries of the negotiation game are denoted below. The value (V) for no coalition for all negotiators (A, B and C) is 0 points. The value of a coalition between A and B is 60 points, between A and C, 40 points, between B and C, 70 points, and a coalition between all players A, B and C gives a total value of 80 points for the players.

$$\begin{aligned} v(A), v(B), v(C) &= 0 \\ v(A, B) &= 60 \\ v(A, C) &= 40 \\ v(B, C) &= 70 \\ v(A, B, C) &= 80 \end{aligned} \tag{1}$$

This game has an endless amount of solutions for the players (in game-theoretical terms: the core is empty). As a consequence, the coalition agreements made by the negotiators

are unstable and there is always at least one proposal that generates a higher value (V) for one or more players. For example, if the negotiators decide to split the total value (V) of the coalitions evenly over the players, then they will choose the coalition that includes all players (A, B, C) which will deliver 80 points in total, which means 26.6 for A, B and C individually. Then, negotiator A and B could agree on a coalition that will deliver them more points because V (A, B) = 60 and both get 30 points if divided evenly. The same also goes for this agreement, as negotiator B and C can do better and so on. The negotiation itself thus revolves around the precise division of points (value) over the negotiators.

The situation where one optimal solution does not exist is representative for many negotiation settings and any agreement made is the result of a multitude of interests that also vary over time and space (Head, 2008). In this negotiation game, the negotiators will never reach a stable solution and will potentially negotiate endlessly (Song & Panayides, 2002). A time constraint of five minutes was set for each round in our experiment. For the procedure see Appendix A.

Procedure

The participants are first randomized and assigned to groups of three. We ensured randomization by having the participants draw from pre-printed numbers that correspond to one of the tables and player positions (A, B or C). After taking place at one of the negotiation tables, the participants all read the instruction sheet (see appendix B). The instructions are read out aloud by one of the researchers and participants can ask questions. Then the negotiations start. The scores of each participant in each round are noted by the players on forms.

Control condition

The participants played the coalition game six times in total (see figure 1). Between rounds, the players are assigned to a different player position (A, B or C). After three rounds, the subjects are re-matched across tables. For an overview of the entire procedure, see appendix A.

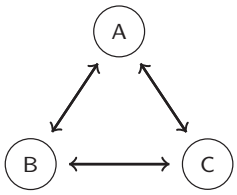


Figure 1: Negotiating a coalition in the control condition.

Treatment condition

The participants in the treatment condition play the same coalition game as in the control condition with the addition that each negotiator has an individual viewer (an individual accountability forum) to which he/she reports. The viewer has an incentive to give feedback to the negotiator and interfere with the process as the viewer receives 30% of what the negotiator earns, not deducted from the negotiators' scores.

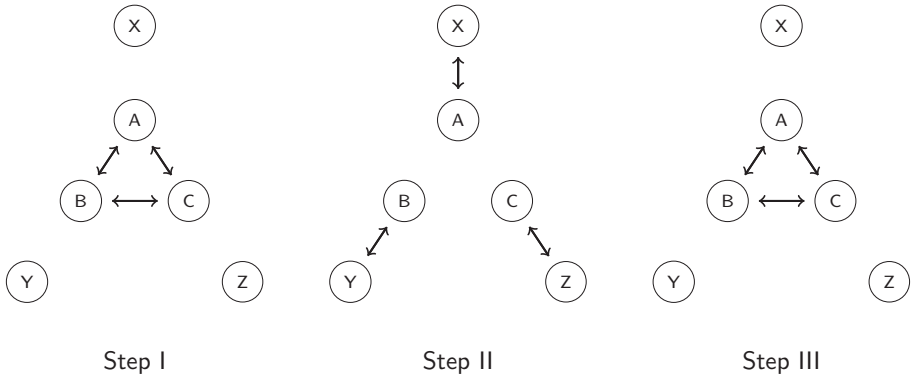


Figure 2: Negotiation a coalition in the treatment condition.

At the fourth minute, the viewers were allowed to give feedback and discuss with the negotiators. When the negotiation started again for one more minute, the viewers had to remain silent. As a result, the ultimate responsibility for the outcome and decisive power remained with the negotiator. All negotiators and viewers could see each other. When the negotiation starts, the players negotiate for two minutes (see step I in figure 2). Then, the players have to discuss with their viewers. The viewers are allowed to react to the strategy, earnings and results of their negotiator only (for one minute) (step II). Then, A, B and C negotiate for an additional three minutes, adding up to a total negotiation time of 5 minutes (step III).

As in the control condition, the negotiators are re-matched over the groups (after three rounds), as well as over the players or supervisor configurations (each round) (see figure 2). The subjects are paired in such a manner that they will never meet the same negotiator and/or viewer a second time.

When the negotiation round finishes, the viewers 'pass judgment' (Bovens, 2005) by giving either a green or a red card to his or her matched player (after step III). In case of a green card, the player is allowed to keep the points earned. Poor performance in the eyes of the viewer can be penalized by a red card. Negotiators who receive a red card have to subtract 2 points from their round-total. Potentially this may add up to a total of 12 points being subtracted from the players total score. Players and viewers switch chairs after three

rounds of play. Finally, the subjects could ask questions and were extensively debriefed and informed about the purpose of the experiment. See appendix A for the order of events and re-matching.

We carried out a pilot session prior to the actual experiment. Based on the pilot round, we improved the wording on the instruction sheet and added green and red cards as means of feedback between negotiator and viewer instead of written feedback.

Rewards

The experiment was part of a public administration and business administration course. The participants were instructed that the points were valuable for them. As a result, the participants were not financially reimbursed, as is customary in experimental economics (Charness & Kuhn, 2011).

Measures and Covariates

Our main dependent variable is the individual scores that the negotiators obtain during the experiment. The background characteristics of the participants were measured using a posttest, paper-based questionnaire right after the experiment. We used the 10-item, Steijn and Leijsink (2009) standardized abridged Dutch version of the PSM questionnaire. In addition to PSM, the questionnaire contained questions on age, gender, study type and a manipulation check (three questions) (See the appendix belonging to Chapter 5).

Table 2: Descriptives and correlations.

	Mean	SD	1	2	3	4	5
1. DV scores (Σ)	108.66	46.06					
2. Experimental condition	0.69	0.46	-0.62***				
3. Male	0.64	0.64	0.02	0.07			
4. Age	24.17	2.66	-0.16	0.16	-0.02		
5. PSM (a = 0.66)	2.93	0.47	0.04	-0.33***	-0.32***	-0.27**	
6. Study type, Public Administration = 1	0.63	0.48	-0.06	-0.02	0.07	0.49***	-0.25**

Note: n=123-138 (pairwise), Listwise n=138. Note: ***p < .01; **p < .05; *p < .1

EXPERIMENTAL RESULTS

Table 2 shows the descriptive statistics and correlations for all variables. Based on the descriptive statistics we can make a number of observations. First, there seems to be a negative statistically significant association between experimental condition and the negotiation scores. Moreover, there is a negative association between PSM and experimental

condition, gender and age. Finally, there is a positive association between age and study type and between PSM and study type. Contrary to our expectation, business administration students seem to have equal or higher PSM levels, compared to the public administration students. A final note is that the reliability of the PSM scale is lower than expected and lower than found in earlier research using the same scale or individual dimensions (cf. van Loon, Kjeldsen, Andersen, Vandenabeele, & Leisink, 2016). All variables are included in later analyses to control for any confounding effects.

At the group-level, the effect of our experimental manipulation is statistically significant (t = 5.38, p = 0.000) and can be considered a large effect size (Cohens d = 1.36). Over the experiment, the negotiators not subjected to accountability scored significantly more points (M = 461.38, SD= 29.54) than the accountable negotiators (M = 380,53, SD = 52,64) (See figure 3). Over the duration of the experiment, individual scores show a similar pattern, regardless of the experimental condition.

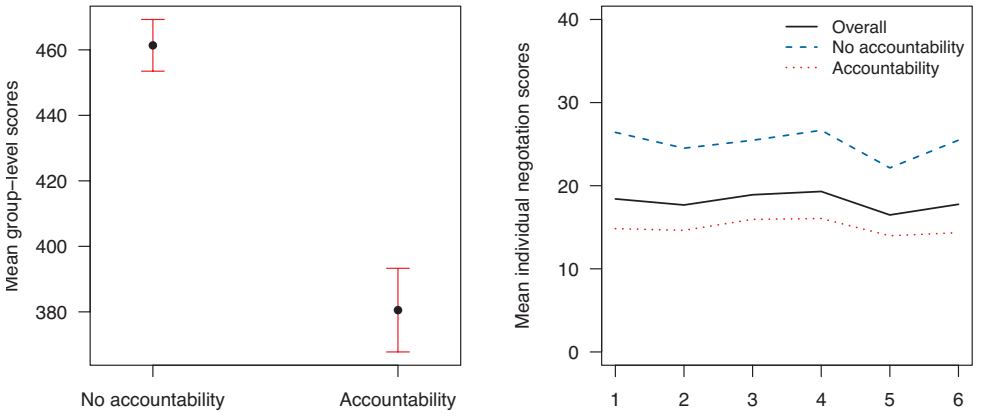


Figure 3: Mean group scores by experimental condition (left). Mean individual scores for the experimental conditions, plotted over time (right).

The negotiators could agree on a coalition type for each agreement, such as AC, AB, BC, ABC or no coalition. The occurrence of coalition types differed significantly over the experimental conditions (X^2 = 51.09, p = 0.000).

Table 3: Coalitions over the experiment, % and (counts).

	No accountability	Accountability	Test
AB	1.2% (1)	16.7% (17)	
AC	2.4% (2)	11.8% (12)	
BC	6.0% (5)	26.5% (27)	
ABC	89.3% (75)	38.2% (39)	
No coalition	1.2% (1)	6.9% (7)	
	100% (84)	100% (102)	$X^2 = 51.09$
			p = 0.000

There are no statistically significant differences between the control conditions of the two study types ($X^2 = 6$, $p = 0.1991$) or between treatment conditions between the two study types ($X^2 = 0$, $p = 1$) (See Appendix D). In order to test the hypotheses, we carried out hierarchical regression in successive steps (Gelman & Hill, 2007). A hierarchical model is especially suited as 1) we analyze clustered data of individual negotiators within groups and 2) individual negotiator performance is a function of group and thus opponent performance. Consequently, the performance will also cluster within groups as result of the experimental setup.

The continuous predictors were mean-centered to reduce the potential effect of multicollinearity in the interaction models. The tests of the two a-priori hypotheses were conducted using Bonferroni adjusted alpha levels of 0.025 per test (0.05/2).

The first hypothesis: *Accountable negotiators will underperform compared to non-accountable negotiators in forming coalitions* is supported by the experimental data. We test this hypothesis at the group (negotiator) level and at the individual level. At the level of the group, there is a statistically significant effect of accountability in the negotiation outcomes (b = -.80.86, $t(29) = -5.11$, $p = 0.000$), $R^2 = .45$, $F(1, 29) = 26.14$, $p = 0.000$. Additionally, this hypothesis is confirmed for the negotiator level with negotiators as random intercepts (See model 1, Table 4).

Table 4: Hierarchical estimates on negotiation scores.

MODEL 1: Experimental accountability treatment				
Fixed effects	**B**	**SE B**	**t**	**p**
Intercept	25.11	0.933	26.93	0.000
Experimental treatment	-10.15	1.121	-9.052	0.000
Random effects	**Variance**	**SD**		
σ^2 Negotiator	2.63	1.62		
σ^2 Residuals	203.40	14.26		
AIC=6682.82, BIC=6701.66, LogLik=-3337.41, df.resid.=814				
MODEL 2: Experimental treatment, PSM				
Fixed effects	**B**	**SE B**	**t**	**p**
Intercept	25.77	1.003	25.68	0.000
Experimental treatment	-11.369	1.25	-9.07	0.000
PSM (ALPHA = .66)	-3.08	1.25	-2.45	0.015
Random effects	**Variance**	**SD**		
σ^2 Negotiator	4.41	2.10		
σ^2 Residuals	202.38	14.23		
AIC=5981.2, BIC=6004.21, LogLik=-2985.62, df.resid.=727				
MODEL 3: Experimental treatment, PSM and interaction				
Fixed effects	**B**	**SE B**	**t**	**p**
Intercept	-25.66	1.04	24.72	0.000
Experimental treatment	-11.32	2.26	-8.97	0.000
PSM (ALPHA = .66)	-2.56	1.70	-1.50	0.133
PSM x Experimental treatment	-1.15	2.53	-0.45	0.651
Random effects	**Variance**	**SD**		
σ^2 Negotiator	4.68	2.16		
σ^2 Residuals	202.38	14.23		
AIC=5979.3, BIC=6006.9, LogLik=-2983.66, df.resid.=726				
MODEL 4: Experimental treatment and covariates				
Fixed effects	**B**	**SE B**	**t**	**p**
Intercept	26.54	1.77	14.99	0.000
Experimental treatment	-11.49	1.34	-8.56	0.000
PSM (ALPHA = .66)	-3.28	1.41	-2.33	0.020
Male	0.48	1.26	0.38	0.702
Age	0.12	0.26	0.44	0.659
Study type	-1.26	1.51	-0.83	0.405
Random effects	**Variance**	**SD**		
σ^2 Negotiator	5.45	2.33		
σ^2 Residuals	202.89	14.24		
AIC=5838.1, BIC=5874.66, LogLik=-2911.04, df.resid.=706				

The second hypothesis: *Compared to non-accountable negotiators, accountable negotiators will perform lower in forming coalitions* is not supported by our data. Model 2 shows PSM has a negative statistical effect on the scores of negotiators, in addition to the experimental condition. Based on our hypothesis, we expect that the effect is stronger for public sector negotiators, compared to private sector negotiators. In other words, the different samples in our experiment need to show a statistically significant interaction with the experimental treatment effect. Model 3 shows that there is no interaction present. Both the experimental treatment and PSM separately have a negative effect on the negotiator scores, which is indifferent to any interaction between PSM and accountability (see figure 4 also). Model 4 also confirms that there is no effect of study type on individual negotiation outcomes (despite the correlation between PSM and study type). Moreover, there is no effect of gender and age on the negotiation outcomes in the experiment.

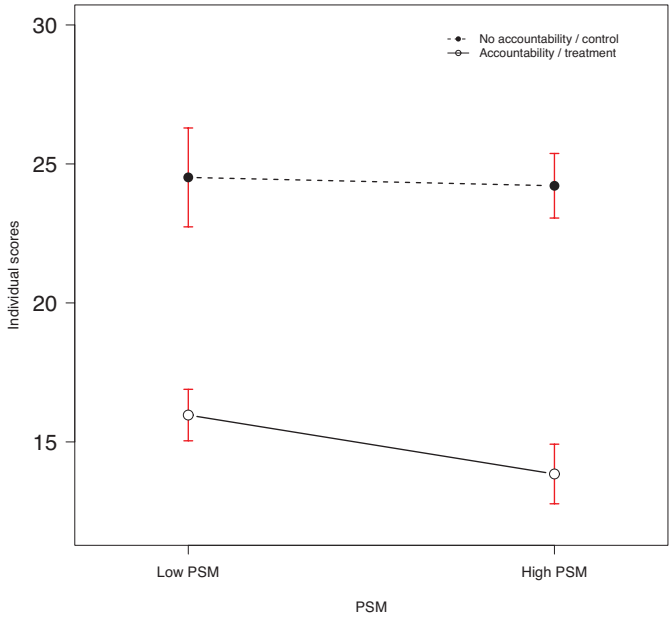


Figure 4: Scores and PSM by experimental condition.

DISCUSSION AND CONCLUSION

Despite that negotiation processes and outcomes occur frequently in many organizations, very few studies have focused on differences between negotiations carried out by public and private sector actors. Similarly, the role of accountability in public and private sector has grown over the years while its effects on public and private sector negotiators have not been studied. This study aimed to add to the literature by focusing on both accountability and differences between public and private sector negotiators.

Firstly, we found that accountability has an adverse effect on the performance of negotiators when forming coalitions. This finding resonates with earlier findings on variable sum negotiations (Pruitt et al., 1978), on groups of negotiators (O'Connor, 1997) and replicates the results of Bouwman et al. (2018a) for negotiating coalitions. In addition, we found that negotiator performance is lower at the group-level, as well as at the individual level. There are a few possible/plausible explanations for this effect. For example, negotiators who are held accountable may feel the need to act stronger or tougher in eyesight of viewers (Mosterd & Rutte, 2000). The pressure of being watched by superiors or the pressure of oversight mechanisms (Shikano et al., 2017) may trigger negotiators to try harder. If all group members try harder when they are being watched, reaching a solution becomes harder. Another potential explanation is that the positive aspects of accountability fora are overrated in theory (Naurin, 2007) and that accountability mechanisms could lead actors to use a different rhetoric (Chambers, 2004), in turn leading to different interactions between negotiators.

Secondly, we found that the effect of accountability on negotiator performance in negotiating a coalition is not significantly different for public sector and private sector negotiators. This finding is interesting as recent research has shown that PSM leads to higher levels of collaboration in three prisoner dilemma games (Esteve et al., 2015). Balancing between collaboration and competition is a crucial element in negotiating a coalition. Also, as accountability is rated as more important by public sector negotiators (de Graaf & van der Wal, 2010) and enforcing accountability triggers more competitive behavior, we expected that public sector negotiators would perform less well. This was not corroborated.

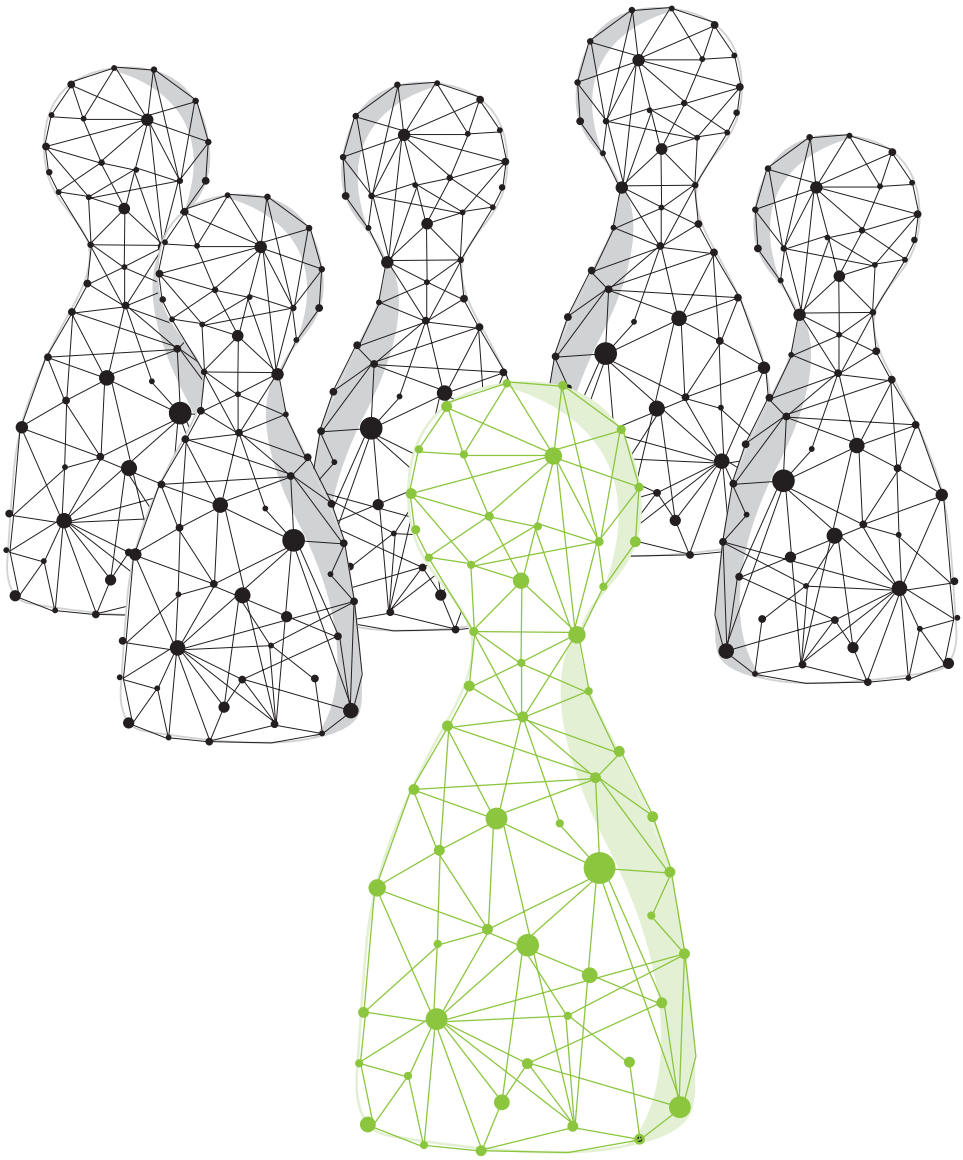
A potential explanation for this finding is that the weight that public sector negotiators attach to accountability as a value does not match with externally enforced accountability in practice. In addition to this, accountability is typically enforced externally in practice, and also in our experiment, which may have a stronger direct effect on behavior than public service motivation does. For example, Jacobsen, Hvitved and Andersen (2014) found that strong perceived obligations for school teachers crowded out their individual motivation. Also, the idea of PSM refers to an unidentified, distal beneficiary while in our experiment, the beneficiaries were proximal (Vandenabeele, Ritz, & Neumann, 2018).

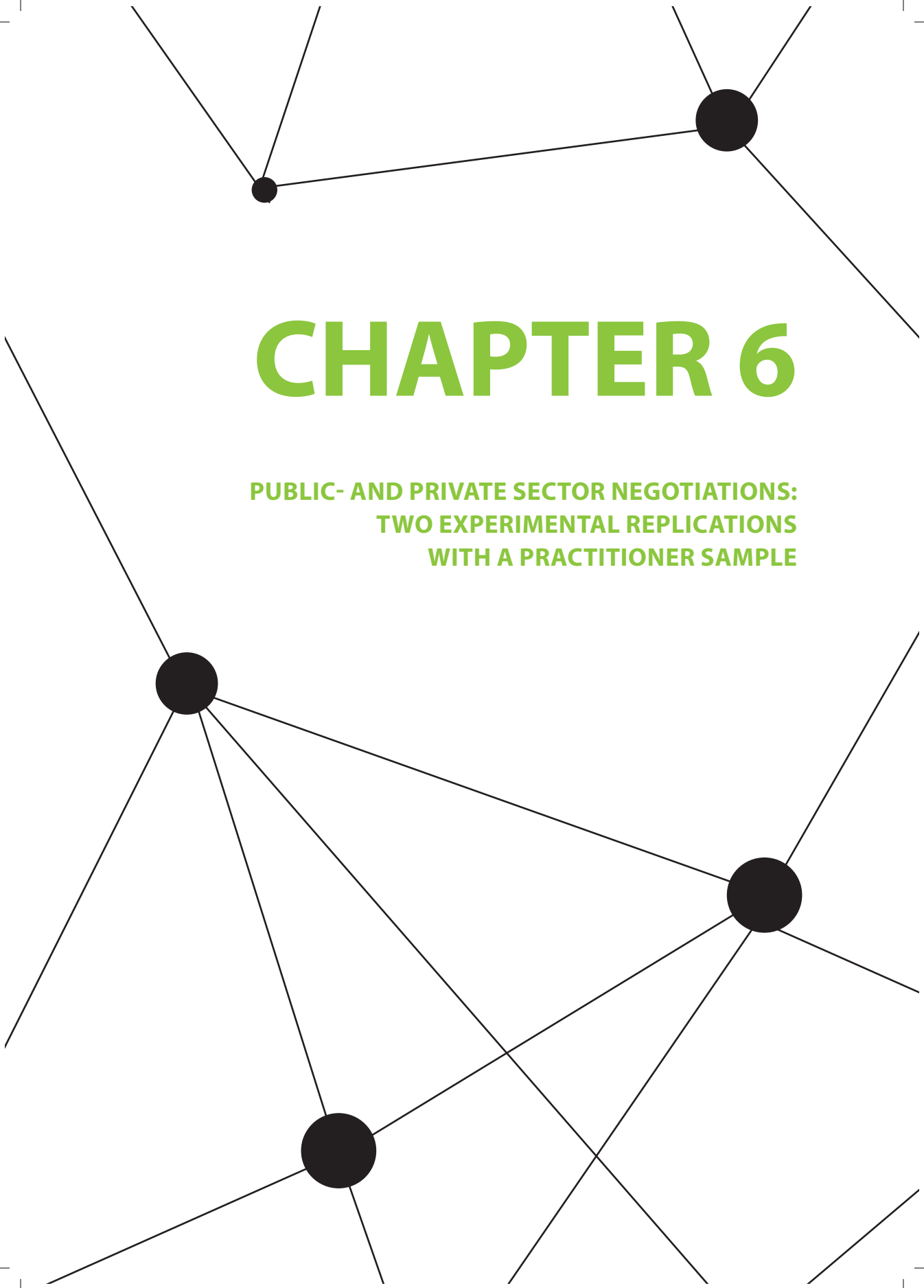
Finally, two important limitations of this study need to be discussed. Firstly, we used student subjects in the experiment to test the effect of accountability on negotiation performance

and to test differences between negotiators oriented towards the public- versus the private sector. Student samples have the advantage of high internal validity because of the homogeneity between experimental conditions (Belot et al., 2015; Charness & Kuhn, 2011). However, different samples may generate different results, especially when it comes to testing our second hypothesis that focuses on differences between the samples of public and private sector negotiators that leans on individual characteristics. Future research should try to use samples that are more representative for public and private sector employees, preferably practitioners.

A second limitation is that our experimental game is a low stakes game and accountability is simulated in a very direct manner: with payoffs for the accountability forum and individual negotiators. In practice, payoffs for individual negotiators may not exist or are more covert. Additionally, the open and visible way in which the negotiators were held accountable in our experiment may have impacted the outcome. This situation is comparable to some extent with the situation in practice where open debates with citizens and media press public leaders for answers impact outcome as well.

To our knowledge, this study is the only scholarly study that empirically and experimentally tests the effect of accountability on negotiator performance for different types of negotiators: those oriented towards the public sector versus the private sector. The absence of studies is remarkable given that negotiation is a core activity of public and private sector employees, and that accountability demands are increasing in both sectors. Our findings stress that accountability has a strong downward effect on the outcomes of negotiations and that this effect is not significantly different for negotiators with public and private sector orientation. More research is needed to improve our understanding of negotiations and accountability for different negotiators, coalition composition, organizations and negotiation types.





CHAPTER 6

PUBLIC- AND PRIVATE SECTOR NEGOTIATIONS: TWO EXPERIMENTAL REPLICATIONS WITH A PRACTITIONER SAMPLE

ABSTRACT

Negotiation is a critical form of decision-making in public- and private organizations. Empirical evidence suggests that public- and private sector contexts are different and that the respective workers have distinguishing traits, motives and behaviors. Experimental research using student subjects show mixed results when it comes to those differences and their impacts on negotiations. An often-heard critique on the use of students as experimental subjects is that they are not representative for the target population and lack experience, rendering findings unreliable.

By using a lab-in-the field experiment, this study presents the results from two replications of negotiation studies. The sample consists of employees from two mid-sized Dutch municipalities as well as university alumni, working in the private sector.

Study 1 shows that public and private sector negotiators indeed show different negotiation behavior and outcomes as their inclination to collaborate differs. Study 2 shows that negotiators with little discretion place larger claims on the total available 'pie', a finding that challenges a core-assumption of game theory. Both study 1 and study 2 show a high resemblance to earlier studies that use student subjects.

This chapter is submitted to an international peer-reviewed journal.

INTRODUCTION

This study replicates two negotiation studies that were originally carried out with a student sample by now using a sample of practitioners.The aim is to understand if and how the findings of the student-based experiments can be replicated with practitioners. The first experiment uses a repeated public goods game (PGG) to test the effect of public service motivation on collaboration in a negotiation setting (Bouwman, van Thiel, van Deemen, & Rouwette, 2018b). The second experiment tests the effect of discretion levels in a negotiation setting on the outcome of negotiations (Bouwman & van Deemen, 2018). By using these two experiments, this paper focuses on individual characteristics and motives by using the PGG and focuses on contextual elements by using a variable sum negotiation game in which discretion is manipulated. There are three reasons why replicating negotiation experiments with practitioners is important.

Firstly, despite the relevance of negotiations as a research topic, there is little empirical research in public administration that focuses on negotiations mechanisms and outcomes, especially at the individual, negotiator level. Some notable exceptions that are relevant for the public sector are Torenvlied and Akkerman (2004), who focus on the interactions between social partners, Lehr et al. (2016), who focuses on information spillovers in wage bargaining or (Perry & Angle, 1979) who focus on role behavior of negotiators. Still, none focus on negotiation behavior and outcomes of public sector negotiators such as public managers, civil servants and private sector managers. This is surprising as negotiation is one of the core processes in the public- and private sector that leads to binding and nonbinding decisions. Politicians, civil servants, and members from civil society generate many agreements and decisions on joint issues. For example: public sector employees negotiate in public–private partnership projects to achieve goals that are aspired by both private and public sector parties (Klijn et al., 1995). Developments, such as New Public Management have led to an increase of the significance of negotiations for public servants as more contracts, performance agreements and covenants have to be made (Hood, 2006; Hood, 1991). Literature on networks in the public sector acknowledges negotiation as an important tool but neglects process of negotiation, tactics and individual characteristics of actors within the network itself (Klijn & Koppenjan, 2012).

Secondly, negotiation literature focuses on the outcomes as a result of traits or motives (Elfenbein et al., 2008; Wilson et al., 2016), negotiation strategy (De Dreu, Beersma, Stroebe, & Euwema, 2006; Knott, Miller, & Verkuilen, 2003), negotiation in teams (O'Connor, 1997), coalitions (Stevenson, Pearce, & Porter, 1986; van Deemen, 2013) and effects of culture on negotiation (Salacuse, 1998). A distinction between public- and private sectors is not typically made, while public and private sector employees differ in negotiation contexts (eg. Colosi, 1983) and at the individual level. For example, private sector workers and entrepreneurs are known to be more risk seeking, in many day-to-day and work activities, compared to government employees (Hartog et al., 2002). Public sector workers on the other hand, act

more collaboratively (Esteve et al., 2015) and are more motivated to contribute to a 'distal' public good, a set of motives better known as Public Service Motivation (Perry & Wise, 1990; Vandenabeele, 2008).

Thirdly, this article also has an important methodological contribution. Many negotiation studies use student participants as experimental subjects. For instance, in a review of 60 laboratory experiments in economics, only four papers used non-students (Danielson & Holm, 2007). A substantial share of public administration experiments also employ students as participants (Bouwman & Grimmelikhuijsen, 2016; Li & Van Ryzin, 2017) but the use of student samples has been the focal point of many methodological debates (Charness & Kuhn, 2011; Open Science Collaboration, 2015). Students are cheap, available, accustomed to receiving and following instructions, and provide a homogenous statistical subject sample (Charness & Kuhn, 2011; Morton & Williams, 2010). However, students are not always considered to be representative for the target population researchers are interested in. Students are for example fairly young and thus inexperienced in certain areas or tasks. A good example for negotiations is that negotiation proficiency has been connected to experience and thus negotiation proficiency correlates with age (Uta & Sabine, 2011). Moreover, a large-scale replication project in the field of social psychology showed that only a small proportion of the findings – based on experiments with student participants – could be replicated (Open Science Collaboration, 2015). Within the recent 'experimental turn' in public administration and the upcoming stream of behavioral public administration (Grimmelikhuijsen et al., 2017) this particular issue has gained attention as part of the broader calls for more replication (Walker, James, & Brewer, 2017).

By replicating the two mentioned studies, we respond to the call for more replications and carry out an empirical generalization (Tsang & Kwan, 1999; Walker et al., 2017, p. 1226) with practitioners from the public- and private sector. The practitioners were recruited from a post-graduate alumni-program and from two medium sized Dutch municipalities. We use a lab-in-the-field setup for running the experimental sessions enabling to collect data with practitioners (See Morton & Williams, 2010 for an overview of experimental types).

In the coming sections, negotiations in the public and private sector are discussed first. After this, we discuss differences between the public- and the private sector at two levels; differences in individual characteristics and differences at the contextual level. This results in three testable hypotheses. Next, we discuss the two experiments and our practitioner sample before we turn to the results and discussion and conclusion of the results.

NEGOTIATION IN THE PUBLIC AND PRIVATE SECTOR

Negotiation is: 'the process of back-and-forth communication aimed at reaching agreement with others when some of your interests are shared and some are opposed' (Ury, 1993). Central to negotiation settings is that the negotiators are interdependent: in order to reach their own

goals, they must coordinate with others (Raiffa et al., 2002). Two types of negotiations can be distinguished: constant-sum/zero-sum negotiations and variable sum negotiations. In constant/zero sum negotiations, achieving one negotiator's goal, directly blocks the other party to achieve his or her goal (Raiffa et al., 2002). Negotiators claim parts of a fixed resource by making offers and counteroffers. Negotiations over fixed means such as budgets are typically constant sum. In variable sum negotiations, all parties can achieve individual goals without blocking other parties' goals. The total size of the 'pie' is not fixed a priori, enabling negotiators to search for alternatives and add value to the pie. Variable sum negotiations allow for problem solving by contributing to individual and group goals (Lewicki et al., 2015). Most negotiations in practice are a combination of the pure constant-sum and variable sum negotiation types, so called 'mixed scanning' (Ibid.). Problem-solving and claiming co-exist in for example public-private partnerships and infrastructural projects as actors are interested in the benefits, that could be mutually exclusive, while they will have to solve issues at the same time. As the public- and private sector are different in aims, contexts, output and outcomes (Boyne, 2002; Bozeman, 2004; Rainey, 2003), negotiations in those sectors are different too (Bouwman, 2018). We discern between differences that take place at the individual level, and differences that are contextual. Below, we first discuss individual differences and then the contextual differences. Similarly, we test individual differences in the first experiment and effects of contextual differences in the second experiment (see the methods also).

Individual differences

Individual differences between public- and private sector workers have been well documented. On average, public sector workers are more motivated to serve the public good, have a higher interest in politics and policymaking, are more willing to self-sacrifice and are more compassionate (Perry, 1996; Vandenabeele, 2007). These motives are better known as Public Service Motivation (PSM). Empirical research has shown that PSM differs systematically between public- and private sector employees and between students of public administration/political science and business administration and economics (Van Witteloostuijn et al., 2017). High PSM individuals such as civil servants are more likely to be whistle-blowers (Brewer & Selden, 1998), show higher job-performance when they have face-to-face contact with beneficiaries (Belle, 2013) and high-PSM physiotherapists serve a higher proportion of disabled patients, which is less lucrative (Bøgh Andersen & Serritzlew, 2012).

Furthermore, PSM is found to be associated with observable behavior in recent experimental laboratory studies. For instance, Esteve et al. (2016, 2015) found that high PSM individuals – such as public servants – act more prosocial if the group also acts prosocial while they do not act more pro-social if the behavior of the group also is less prosocial. Extending the findings of Esteve et al. (2016), Bouwman et al. (2018b) used a repeated public goods game, mimicking repeated negotiation interactions. As many interactions in both the public and private sector are recurrent, repeated negotiations arguably provide a better benchmark

for testing collaboration. In this experiment, student participants were matched based on the study programs they were enrolled in, effectively creating high, low and mixed PSM-groups of negotiators. This way, overall collaboration and conditional collaboration, based on group-matching was tested.

The most important finding by Bouwman et al. (2018b) is that high-PSM subjects tend to collaborate more than low-PSM subjects by making higher contributions over the entire experiment, regardless of matching to low- or high-PSM opponents. We assume that public and private sector practitioners will behave the same as the student-subjects in the original experiment. Therefore, the first hypothesis is:

> **H_1:** In a repeated negotiation, high-PSM subjects act more collaboratively than low-PSM subjects.

Contextual differences

Public and private sector contexts are different from each other in a number of dimensions. For instance, public organizations create public goods and services by definition, they are publicly owned and financed by means of taxes, and public organizations (and thus public sector workers) adhere to a different set of values. In practice, negotiations in the public sector are carried out in name of some unidentified beneficiary: citizens or society at large. In the private sector, negotiations are carried out in name of a company, which has more proximal owners or shareholders. In the private sector, accountability regimes are focused on financial outcomes such as bottom line results, while accountability in the public sector is focused on procedures and policy outcomes, via political representation (Mulgan, 2000b).

Another interesting difference between public- and private organizations is that whereas private organizations pursue a limited set of goals like continuity and profitability, public organizations pursue many more goals that are can be conflicting internally or with the goals of other public organizations (Rainey & Bozeman, 2000a).

While the public-private distinction has been criticized in the past for being overly simplistic (Perry & Rainey, 1988; Weintraub, 1997), and the distinction between sectors is blurring (Dees & Anderson, 2003; Lee, 2011), the main tasks and functions remain different for public- and private sector organizations. One approach treats organizations not as dichotomous but places organizations on a continuum in a plane with two axes: political influence and economic autonomy (Bozeman, 2004). All organizations experience some level of political influence, with private organizations experiencing little political interference and public organizations high political influence. Similarly, private sector organizations are relatively autonomous when it comes to deciding over organizational assets while public organizations have less autonomy in doing so. Overall, public organizations have less autonomy, both financially and politically, leaving less room for workers to make individual choices and weigh personal considerations.

In general, discretion of individuals has been argued to positively impact productivity (Graham, 1992; Strain, 1999). This increase in performance is also observed for teams of people, working together on a common task (Leach et al., 2005). Moreover, more discretion leads to more extra-role behaviors and a greater variety of in-role behaviors for workers (Gellatly & Irving, 2001). As autonomy for organizations varies between public and private organizations, and public sector negotiators have less discretion as a consequence, the responses from public- and private sector negotiators will be different (Bouwman & van Deemen, 2018). In a negotiation setting, less discretion means less space to maneuver and less opportunity to explore alternative agreements (see the design of the second experiment). From a game-theoretic perspective, discretion in negotiations is dependent on the size of the negotiation set. The negotiation set is the number of available potential solutions to a negotiation problem. More potential solutions equal more alternative solutions and more opportunity or need to explore these solutions.

Bouwman and van Deemen (2018) tested if the negotiation outcomes vary with changes in negotiator discretion – the negotiation set - in a coalition game. In an experiment with $n = 158$ student subjects, they manipulated the level of discretion that negotiators had in three levels: small, medium and large negotiation discretion. They found that - in contrast with the game-theoretical prediction – negotiators claimed a larger part of the total pie when they negotiated in the small condition, compared to the medium condition. In the medium and large conditions, the differences were not statistically significant. The attractiveness of negotiation solutions for negotiators apparently varies with the level discretion they experience (Ibid.). Therefore, the second hypothesis for this replication is:

H_2: The solution of the negotiation problem varies with the size of the negotiation set.

Additionally, they tested whether responses to contextual discretion were different for high-PSM and low-PSM negotiators. As public sector workers have a number of distinguishing characteristics, such as lower risk tolerance (Hartog et al., 2002; Wildavsky & Dake, 1990), being attracted to working in the public sector (Vandenabeele, 2008) and showing different behavior when solving complex problems (Franco & Rouwette, 2016), it is expected that subjects with high PSM will also negotiate differently. Moreover, as public sector negotiators are subject to more political interference, and less financial autonomy (Bozeman, 2004), they expected the effect of discretion to be stronger for subjects from the public sector, such as those subjects with high-PSM (Bouwman & van Deemen, 2018). For this replication, we have the same expectation, resulting in the following hypothesis:

H_3: The effect of variations in the size of the negotiations set is stronger for public sector negotiators than for private sector negotiators.

Note that the expectation that high- and low PSM subjects behave differently under varying levels of discretion was not corroborated in the original study (Ibid.). This replication is based on the same theoretical foundations and thus results in the same hypotheses.

DATA AND METHOD

This section sets out the two experiments that were used to test the hypotheses. First, we describe the lab-in-the-field setup, next we lay out the specifics of the two experimental designs, the experimental conditions, the participants, measures and posttest measures.

Design and participants

This study utilizes a lab-in-the-field approach in order to test the hypotheses. The replication is a so-called empirical generalization: the same experimental design is used, but with a different sample composition (Walker et al., 2017). Critiques on traditional laboratory experiments often focus on the potentially lowered external validity and limited statistical generalizability (Bouwman & Grimmelikhuijsen, 2016; James, Jilke, & Van Ryzin, 2017). A lab in the field setting offers the advantage of a highly-controlled laboratory setting, combined with a more ecological valid subject sample thereby increasing also the external validity (Morton & Williams, 2010). We ran three sessions of the experiments over the course of three months in the Fall of 2017. We used 24 connected laptop-computers, placed in individual cubicles at the respective locations of the municipalities and with the university alumni. The laptops were equipped with Z-tree 3.6.7 for administering the experiment (Fischbacher, 2007).
Each of the sessions took place according to the same protocol: first the participants were seated at one of the cubicles, the instructions for the first experiment were read out aloud by the researcher and appeared on the screens, then the participants could ask questions. Next the first experiment commenced. After 20 rounds of the first experiment, the instructions for the second experiment followed. Again, questions could be posed and the second experiment was started. Finally, the post-test questionnaire followed and the subjects were debriefed (See Figure 1).

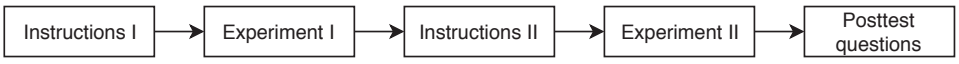


Figure 1: Order of events during experimental sessions.

Experiment 1

The first experiment is a quasi-experiment, in which the participants play a repeated two-person public goods game (PGG). The aim of this experiment is to test whether cooperation varies with Public Service Motivation. PGGs are commonly used to study cooperation, and competitive behavior (eg. Hauert et al., 2002; Semmann et al., 2003). Additionally, our game is a repeated public goods game, meaning that players have the same opponent for a number of rounds, instead of rematches for each decision. As building trust is central to many negotiations relations, a repeated public goods game is better suited than the one-shot alternative (Fehr & Gächter, 2000b).

A public goods game enables the negotiators in the game to choose between cooperation and competition. The participants are asked to allocate an amount to a common pool from an initial received endowment of 10 units. Thus, the participants choose how many of the 10 units are contributed and how many remain in the 'purse' of the individual negotiators. The contributed amount to the common pool is multiplied by the known multiplier of 1.5 and are divided over both the contributors. This way, high contributions generate higher utility for the individual contributors.

The competitive choice is to expect the opponent to contribute, but refrain from contributing yourself. A cooperative choice would be to contribute as much as possible, increasing the odds of a higher joint outcome. The PGG was played twenty rounds, with no rematches in between. The participants had full information on all aspects of the PGG except the identity of their opponent.

This replication deviates in two ways from the original Bouwman et al. (2018b) study. First, the participants negotiate 20 times, instead of 30 in the original study. Second, the practitioners were not matched to their opponents based on their expected PSM levels, as the students were in the original study.

Experiment 2

The second experiment is a within-subjects design with a variable sum negotiation game in which the players were asked to divide a surplus in pairs of two (cf. Bouwman & van Deemen, 2018). The negotiators are given lower and upper boundaries for the surplus and have to make offers and counteroffers in order to arrive at an agreement on how to split the surplus. The players could make as many proposals back and forth as they wished, within the timeframe of 30 seconds for each decision. To create an agreement, the negotiators could select the offers and click on 'agree'. Reaching an agreement or running out of time ended the negotiation round. If none of the players agreed, the payoff was zero for the players.

The size of the surplus (or the upper and lower boundaries) were manipulated in this experiment in order to test the effect of discretion levels on the negotiation outcomes (see Table 1). For each negotiation round, the players were randomly placed in one of the three

experimental conditions of small, medium sized and large negotiation discretion. Effectively, the size of the surplus was 10, 30 or 90 points for each decision.

Table 1: Experimental conditions and discretion size (cf. Bouwman & van Deemen, 2018).

Negotiation discretion	Small	Medium	Large
Lower and upper boundaries	90-100	80-110	70-160
Size of the surplus	10	30	90

After two test rounds, the negotiators were randomly re-matched each 10 rounds. This was done three times, leading up to 30 negotiation decisions per individual negotiator, with three different opponents. Negotiators could not 'meet' the same opponent a second time.

This replication deviates from the original study by Bouwman and van Deemen (2018) as it is a within-subjects design in which the participants are randomly assigned to all of the experimental conditions, compared to the original between-subject study in which the participants were randomly assigned to one condition only. A within-subjects design is advantageous as it creates a individual-level baseline to compare the treatments. A within-subjects-design also offers advantages in terms of statistical power (Greenwald, 1976).

Incentives

The participants were instructed that the points were valuable to them. The participants were not reimbursed financially, as is customary in behavioral economics (Charness & Kuhn, 2011). After the experiment a workshop was held in which the results of the prior negotiation research were discussed.

Variables

As the aims for the two experiments are different, we used two different dependent variables. In the first experiment, we focus on the contributions to the common pool of the individual negotiators. The contributions in a PGG are a conventional measure of pro-social behavior (Esteve et al., 2016; Hauert et al., 2002) because the negotiators are asked to balance between contributing to a greater good at the cost of their own benefit. In the second experiment, the dependent variable is the claim that negotiators agreed on as percentage of the total available 'pie' or surplus. This way, the claims can be compared across experimental groups and for the background variables.

In order to control for the background characteristics of the subject sample, a posttest questionnaire was given to all participants. The questionnaire contained questions on age, gender, and highest educational level attained. Additionally, the subjects filled out the standardized Kim et al (2013) translated public service motivation PSM questionnaire with 16 items. The individual PSM measure provides the basis on which public sector and private

sector oriented negotiators can be distinguished. In addition to this, we measured risk propensity with the Risk Taking Index (TKI) (Nicholson et al., 2005) and Social Value Orientation by using a decomposed game (Murphy, Ackermann, & Handgraaf, 2011; Van Lange, 1999) as risk taking and value orientation is known to vary over individuals and to impact negotiation behavior (Lewicki et al., 2015).

Ethical statement

At the time of data collection, no formal requirement existed for formal approval of the ethical committee for studies that were non-clinical. All participants in our subject sample gave verbal consent during the sessions. This consent is seen as sufficient as there are few risks involved and the participants were free to opt-out at any given moment without consequences. Prior to the experiment, the participants received instructions and were told that there were no negative consequences of opting out and that data was stored anonymously and that the data would be used for (re)analysis. After the experiments, the participants were debriefed extensively about the aim and purpose of the study and were still given the opportunity to opt-out.

EXPERIMENTAL RESULTS

In total, there were 30 participants in three different sessions. The participants are employees from the real-estate departments from two mid-sized Dutch municipalities. Real-estate employees typically negotiate over acquisition and sale of plots and coordinate with housing developers. Additionally, a session was organized by inviting alumni from the university. These participants have a background in project development, sales and consultancy.

In the first experiment, the participants played 20 rounds, adding the observations up to n=600. For the second experiment there were 32 decisions for each negotiator, adding up to n=960 observations. Table 2 displays the descriptive statistics and correlations for all variables. Based on the descriptive statistics, we can draw a number of conclusions. Firstly, the average age of the participants is 44.23 years, with over two thirds of the sample being male. What stands out is that pro-social motivation is negatively associated with pro-self-motivation. Theoretically, prosocial motivation is the motivation to help identified while pro-self-motivation is the tendency to contribute to the self, rather than others. How pro-social and pro-self motivation relate is part of an ongoing discussion. Our descriptive findings seem to suggest that pro-self and pro-social are two extremes on one dimension.

Secondly, the scores in the second experimental game are positively associated with the contributions in the first experiment. The latter means that negotiators who contributed higher amounts in the PGG, also claimed a larger share of the 'pie' in the discretion experiment.

Table 2: Descriptive statistics and correlations (n=30).

		Mean	SD	1	2	3	4	5	6	7	8	9
1	Male	0.633	0.49									
2	Age	44.233	11.395	0.12								
3	Highest education	3.433	0.898	-0.02	-0.1							
4	Public sector	0.833	0.379	-0.15	-0.14	0.32						
5	Pro-self	0.667	0.479	-0.1	0.01	-0.05	-0.13					
6	Pro-social	0.267	0.45	0.15	-0.02	0.05	0.27	-0.85***				
7	PSM (alpha = 0.90)	3.818	0.475	0.28	-0.03	-0.07	-0.25	-0.18	0.26			
8	Risk (alpha = 0.82)	2	0.515	0.08	-0.24	0.17	0.16	-0.07	0.04	0.06		
9	Contribution experiment 1	5.77	1.798	-0.06	-0.05	-0.02	0.29	-0.21	0.21	0.21	0.21	
10	Scores experiment 2	0.331	0.077	-0.2	-0.04	0.01	0.01	-0.14	-0.07	0.06	0.31	0.38*

Note: *p < 0.05; **p < 0.01; ***p < 0.001.

Experiment 1: repeated PGG

A regular OLS regression was used to test the effect of the individual characteristics of the negotiators on the contributions in the repeated public goods game. The results show PSM has a positive effect on the height of the contributions (table 3, model 1). When adding the covariates: gender, risk and pro-social motivation are also statistically significant. Individuals with higher PSM contributed more, while males contributed less, a higher education also leads to lower contributions and risk propensity and pro-social motivation lead to higher contributions (table 3, model 2). In the third model (table 3, model 3), significant interaction terms were retained. Despite the poorer model fit compared to the first and second model there is a significant interaction between PSM and risk propensity. Based on these analyses the first hypothesis: 'In a repeated negotiation, high-PSM subjects act more collaborative than low-PSM subjects' is supported by the data.

Adding the covariates in model 3, distorts the effect of PSM. Prosocial motivation and risk both have a positive effect on contributions, while being male has a negative effect on the contributions (model 2). Moreover, the effect of prosocial motivation on the contributions is conditional on the risk propensity of the participants and vice versa (model 3).

For further analysis, we split subjects that score lower than the median on PSM into the low-PSM category. Individuals that scored higher than the median are assigned to the high-PSM category. The same was done for the risk-taking variable. Taking a closer look at the interaction effect between the contributions in the repeated PGG, risk propensity and PSM, we can conclude that individuals with a low risk propensity, and low PSM, contribute less

on average, compared to individuals with a high-risk propensity and low PSM. This effect is stronger for individuals with high(er) levels of PSM. On average, individuals with higher PSM levels contribute more to the PGG, while low risk individuals contribute less than do high risk individuals (see figure 2).

Table 3: OLS, DV = Contributions in a repeated PGG (n = 600).

MODEL 1: PSM only				
	B	**SE B**	**t**	**p**
Intercept	2.764	1.098	2.518	0.01207*
PSM	0.787	0.285	2.757	0.00601**
F statistic = 7.603*** (df=1;598), Resid. Std. Error = 3.264 (df = 598)				
MODEL 2: Covariates added				
	B	**SE B**	**t**	**p**
Intercept	1.605	1.537	1.044	0.297
PSM	0.719	0.305	2.361	0.018*
Male	-0.602	0.290	-2.075	0.038*
Age	0.003	0.012	0.286	0.775
Education	-0.107	0.153	-0.702	0.483
Round	0.0259	0.023	1.134	0.257
Risk	0.775	0.273	2.834	0.004 **
Prosocial	0.716	0.311	2.301	0.022 *
F statistic = 3.634*** (df=7;592), Resid. Std. Error = 3.233 (df = 592)				
MODEL 3: Covariates and interaction				
	B	**SE B**	**t**	**p**
Intercept	17.365	5.2988734	3.277	0.00111**
PSM	-3.475	1.384	-2.511	0.012 *
Male	-0.282	0.306	-0.924	0.356
Age	-0.000	0.012	-0.043	0.966
Education	-0.178	0.154	-1.160	0.246
Round	0.026	0.023	1.143	0.253
Risk	-6.329	2.303	-2.748	0.006**
Prosocial	0.465	0.319	1.458	0.145
Risk * Prosocial	1.928	0.621	3.106	0.001**
F statistic = 4.432*** (df=8;591), Resid. Std. Error = 3.209(df = 591)				

Note: *p<0.1; **p<0.05; ***p<0.01. VIF values all below 10 and around 1 (model 1 and 2).

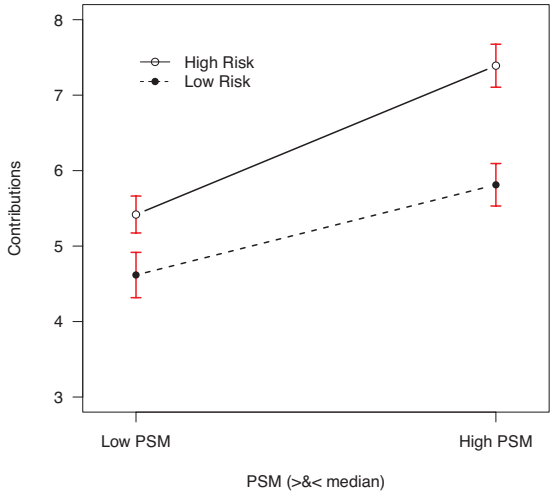


Figure 2: PGG Contributions by Risk and PSM.

By splitting up the contributions by PSM and plotting them over time, we can see that most negotiators start out with roughly equal contributions in the first round (figure 3). Over time, the slope of low-PSM individuals is downwards, whereas the slope for high-PSM individuals is upwards in the first rounds (1-14) and downwards in the last six rounds. This suggests that cooperation levels (up- and downward slopes are variable over the experiment, and are different for the low- and high-PSM negotiators.

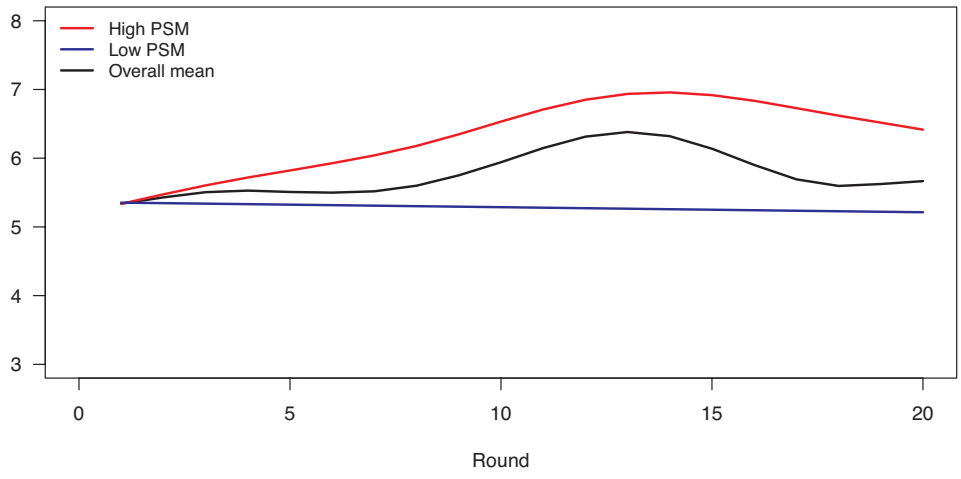


Figure 3: PGG contributions over time, by PSM.

Experiment 2: Negotiator discretion game

The second hypothesis 'the solution of the negotiation problem varies with the size of the negotiation set' is supported by the data. There was a significant difference between the means of experimental conditions (discretion size) and the claims of the surplus ($F(2,957)=6.06$, $p = 0.002$). As the size of the surpluses differed over the experimental conditions, we calculated a relative claim size by dividing the agreed scores for the negotiators by the total possible amount to claim per experimental condition. A post-hoc comparison using the Scheffé-test indicated that the low discretion condition ($M = 0.301$, $SD = 0.244$) was significantly different from the medium discretion condition ($M = 0.358$, $SD = 0.225$). The large discretion ($M = 0.349$, $SD = 0.221$) condition did not differ significantly from the medium and small condition (see figure 4).

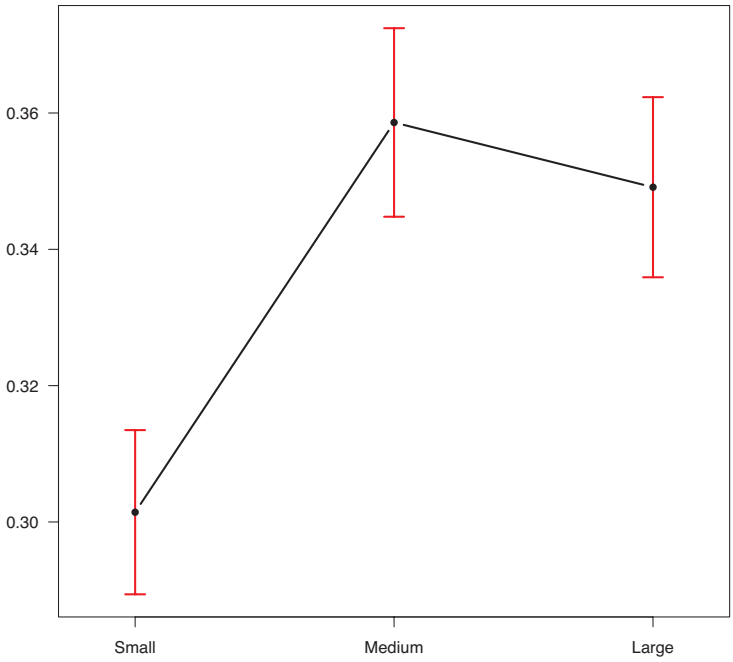


Figure 4: Agreed % of total surplus, by experimental condition.

Because the negotiators participated in multiple rounds and the negotiations outcomes could be an effect of the matched groups we additionally fitted a hierarchical model using the lmerTest package (Kuznetsova, Brockhoff, & Christensen, 2017) in R (R Core Team, 2018). The relation between the experimental conditions small, medium and large discretion and the size of the claims of the surplus is tested. As the dependent variable is a percentage of the

surplus agreed on, the betas are relatively small. The experimental conditions as well as the covariates are entered as fixed effects (model 5).

The matched groups were used as random intercepts (model 4 and 5, table 4)[10] and the experimental condition 'medium' is used as reference category.

Again, the experimental condition 'small' contributes positively to the agreed size of the surplus (see table 4). Risk propensity also has a positive relationship with the agreed size of the surplus. Being male has a negative impact on the agreed surplus size.

Table 4: Hierarchical estimates on agreed surplus.

MODEL 4: Experimental conditions, varying intercepts for negotiation dyads				
Fixed effects	**B**	**SE B**	**t**	**p**
Intercept	0.358	0.015	23.020	0.000***
Small	-0.056	0.019	-2.997	0.002**
Large	-0.010	0.020	-0.489	0.624
Random effects	**Variance**	**SD**		
σ^2 Dyads	0.000	0.023		
σ^2 Residuals	0.053	0.231		
AIC = -68.8, BIC = -44.5, LogLik = 39.4, df.resid = 955				
MODEL 5: Experimental conditions and covariates, varying intercepts for negotiation dyads				
Fixed effects	**B**	**SE B**	**t**	**p**
Intercept	0.213	0.092	2.317	0.022*
Small	-0.053	0.018	-2.861	0.004**
Large	-0.008	0.019	-0.418	0.676
PSM	0.018	0.017	1.052	0.293
Risk	0.047	0.015	2.974	0.003**
Male	-0.039	0.016	-2.381	0.017*
Age	0.000	0.000	0.629	0.530
Education	-0.002	0.008	-0.325	0.746
Pro-social	-0.017	0.018	-0.983	0.326
Random effects	**Variance**	**SD**		
σ^2 Dyads	0.000	0.016		
σ^2 Residuals	0.053	0.230		
AIC = -71.2, BIC = -17.6, LogLik = 46.6, df.resid = 949				

10 Note that the variance of the negotiation dyads is (rounded off) almost zero. However, the model quality (LogLik) is significantly improved by adding the matched dyads as level 1.

The third hypothesis: 'The effect of variations in the size of the negotiations set is stronger for public sector negotiators than for private sector negotiators' is not confirmed by the experimental data. The difference between the experimental conditions is significant ($F(2,956)=5.88$, $p = 0.003$) but there is no effect of PSM ($F(1,956)=0.423$, $p = .516$) (see figure 5). This hypothesis is also disconfirmed by adding PSM to the hierarchical model (table 4, model 5). In the post hoc analyses, a small effect for self-reported risk propensity was found in this experiment: individuals who reported engage in more risky activities, agreed on larger total claims in the experiment. Similarly, males agreed on smaller claim sizes, compared to women in the experiment while age, education and pro-social motivation does not cause different negotiation agreements.

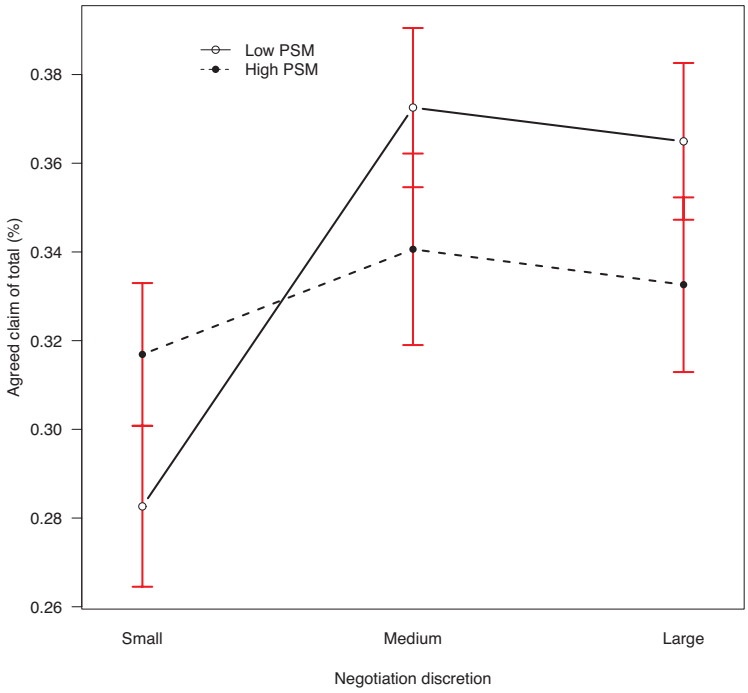


Figure 5: Agreed % of total surplus, by experimental condition and PSM.

DISCUSSION

The central aim of this study was to understand if and how the findings of two negotiation experiments could be replicated using practitioners instead of a student-based sample. Two experiments were used, one that focuses on individual characteristics by using a repeated PGG and one that focuses on responses to negotiation discretion by using a variable sum game that deals with splitting a surplus. Compared to the original experiments by Bouwman et al. (2018; 2018b), similar patterns are found for both experiment 1 and 2 in this replication.

For the repeated public goods game in experiment 1, the findings in this study mirror the original findings with student subjects and show that PSM has a positive effect on the contributions in a PGG. Subjects with high PSM levels act more collaboratively than those with lower PSM levels. This study additionally found that risk propensity has an almost equally strong positive effect on the contributions, while risk and PSM are not correlated in our sample. By now, a number of studies have tested the idea that subjects with high PSM are more collaborative in prisoners dilemmas (Esteve et al., 2015) and public goods games (Esteve et al., 2016). The findings from these studies suggest that PSM is indeed positively associated with collaboration, albeit conditional collaboration based on the PSM of the others in some instances (Delfgaauw & Dur, 2010). Our study uses a repeated PGG in which building trust and reciprocity plays an equally important role. In repeated PGG settings, individuals tend to cooperate in general (Fischbacher et al., 2001). Our study demonstrates that this higher level of collaboration is not only an effect of PSM in students but also in practitioners.

In the second experiment, we found that the negotiation outcome varies with the size of the negotiation discretion. This finding differs slightly from the findings in the original study by Bouwman and van Deemen (2018) which is based on a student-sample. In the original study, negotiators in the small discretion condition, agreed on larger claims of the 'pie', while in our replication, negotiators in the small discretion condition agreed on smaller claims of the pie. In both cases, negotiation outcomes are especially different when there is little discretion, compared to medium and large discretion. The idea that negotiation outcomes vary with negotiation discretion size, and thus the number of negotiation solutions, challenges one of the fundamental assumptions of game theory, namely that the solutions to a bargaining problem is only dependent on the expected utility functions of the negotiators. However, our findings are in line with findings from management studies in which discretion is positively linked to performance (cf. Leach et al., 2005; Strain, 1999).

Furthermore, we found that there is no significant difference for subjects with high-PSM and subjects with low-PSM for their negotiation behavior. This finding suggests that when contextual elements exert a strong influence on the negotiation setting, such as discretion, the effect of individual motives and values is reduced. Like in the original study, on average, male negotiators agree on smaller claim sizes. Potentially, men in our experiment have behaved more competitively. Men are found to behave more competitively on average

in most negotiations (eg. Lewicki et al., 2015). A variable sum negotiation setting as in our experiment penalizes strong competition because it is costly not to agree or not to cooperate as the payoff is zero. Also, risk propensity is positively linked to agreed claim size, in our study and in the student-based study. Risk-taking is central to negotiation as it involves exposing intentions and dealing with those of others. Risk-taking varies over individuals (Galinsky et al., 2002) and over cultures (Foster, 1992) while the difference in risk taking and its effects in the public-and private sector has thus far been neglected. This study shows that the level of risks that individuals are willing to tolerate in various domains of their lives such as sports, socially and financially (Nicholson et al., 2005), are positively related to the claims they agree on in a negotiation setting.

An important contribution of this study is that the pattern of behavior found in the two negotiation studies with student samples is similar to the behavior of practitioners. Replication is at the core of scientific progress as it creates cumulative knowledge, rather than moving from one-shot finding to another (Walker et al., 2017). Moreover, varying in contexts, subject samples, experimental designs and realism, enables testing and falsifying theories. While calls for replication are made frequently, actual replications are relatively rare in many social science fields (Hamermesh, 2007). This is remarkable given that there seems to be a strong upswing of using experiments in public administration and public management (Li & Van Ryzin, 2017). Experiments are typically touted as being more suitable for replication than for instance qualitative interviews and case studies.

In studies that compare student subjects with practitioners, differences are often found, depending on the setting, the game and sample composition (Anderson et al., 2013; Cappelen, Nygaard, Sorensen, & Tungodden, 2010; Carpenter, Burks, & Verhoogen, 2005; Falk, Meier, & Zehnder, 2013). For example, Belot, Duch and Miller (2015) found that students are more likely to behave rational and selfish than non-students leading them to conclude that experimental studies that use students are likely to overestimate the extent to which individual actors are in fact selfish and rational. A test of differences in a public goods game yielded substantive differences between students and non-students, who were generic citizens in their sample (Ibid.). Our study suggests that practitioners and students do respond in a similar fashion. This has two important implications. First, it suggests that the relationship between age, or rather experience, and negotiator efficacy is quite limited in our sample. Secondly, from a methodological perspective it suggests that student samples can serve as a good benchmark for testing theories when these are being replicated in the field with practitioners.

Limitations and further research

This study has three limitations that need to be discussed. The first limitation is that we have used a relatively small subject sample of practitioners. Even though the number of observations for both experiments are sufficient to run frequentist statistical analyses, more studies with replication in practitioners are much needed as sample size may directly influence the results

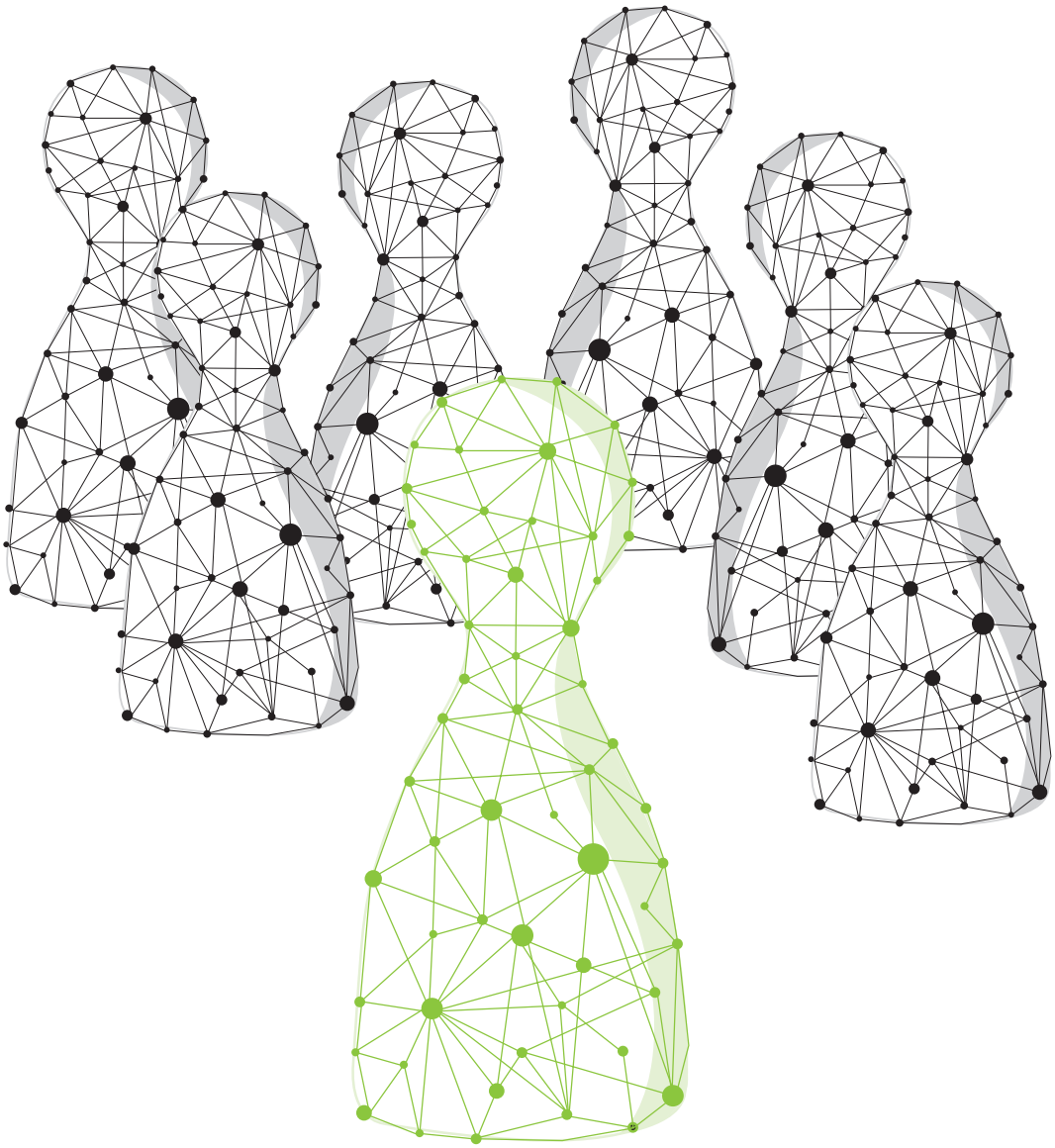
and potentially threatens reliability. Based on our smaller sample size, this study gives a good indication of effects.

Secondly, when comparing practitioners with student subjects, a number of observations can be made. Firstly, students are quicker to comprehend instructions, but also to ask questions. Moreover, the practitioners in our sample were not easily persuaded to turn off their cellphones and were tempted to look at the computer screens of other participants, despite being placed in separate cubicles and specifically instructed not to do so. During the sessions, this behavior was quickly addressed, and although the participants were anonymous in the experiment, we cannot rule out any effects this may have caused. Future research could focus on more large-scale comparisons with practitioners as well as on testing differences how homogenous student samples and more heterogenous practitioner samples compare in terms of comprehension of instructions, tractability and external distractions such as telephones during experimental sessions.

Thirdly, in the original PGG experiment by Bouwman et al. (2018b), the participants were matched in negotiation dyads, based on their study enrollment. As we had no background information on the participants a priori, and the experimental sessions were run with either public sector or private sector participants, this was not feasible. This also means we could not test whether collaboration in the repeated public goods game is conditional based on group composition in practice as Esteve et al. (2016) have found or unconditional as found by Bouwman et al. (2018b). Based on the idea that private sector negotiators have lower PSM than public sector negotiators, the point of conditional collaboration based on group composition is especially salient in public-private partnerships as parties need to collaborate to a high degree and stem from different sectors. This important theoretical point could be addressed in future research by having negotiators play with covert or revealed identities.

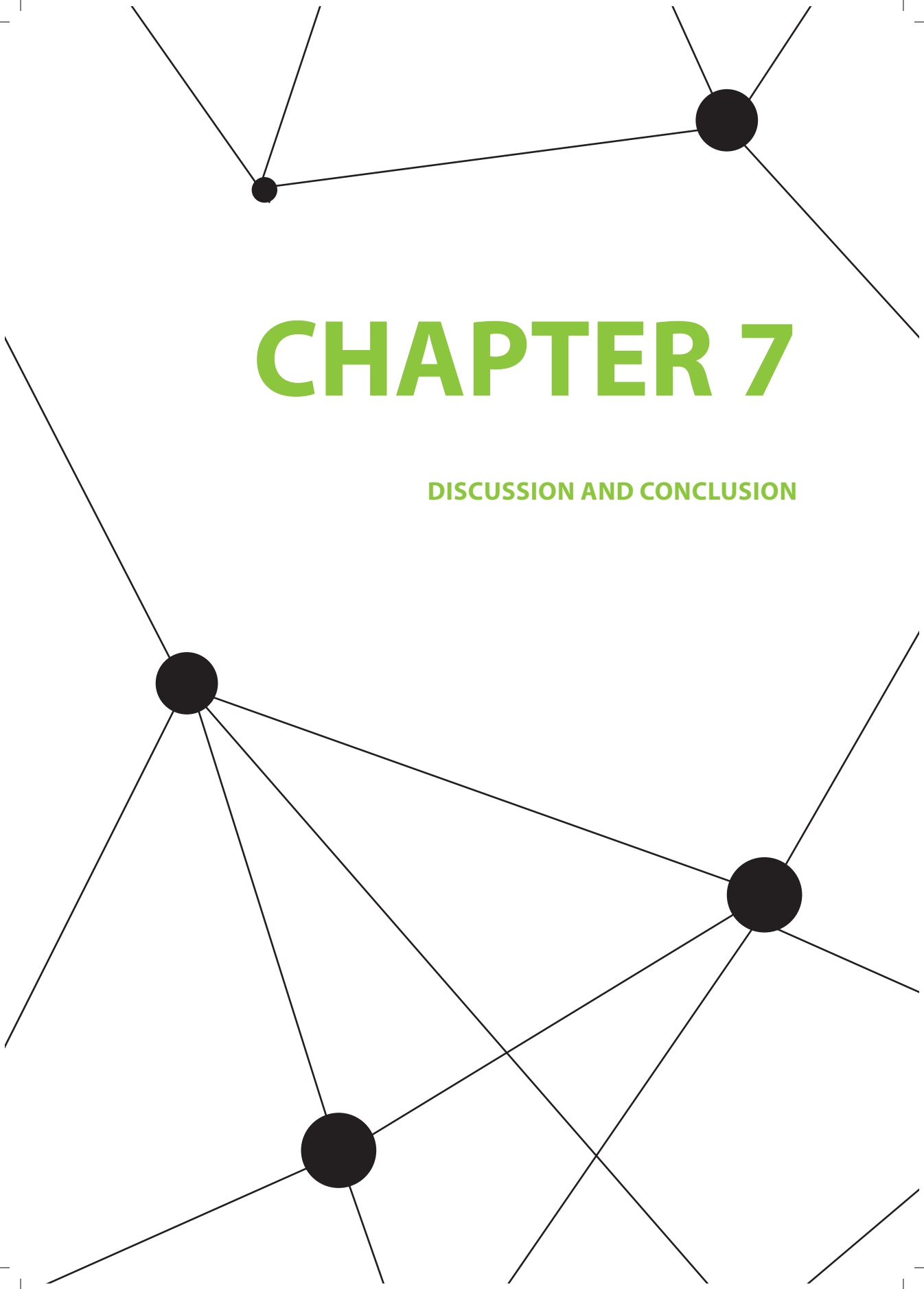
CONCLUSION

This study is one of very few lab-in-the-field experiments, with the aim of replication with practitioners. To the knowledge of the author, no other study systematically assesses the validity of the findings of earlier negotiation studies with a sample of practitioners, by focusing on public- and private sector characteristics. The main finding is that practitioners with high PSM also make higher contributions and thus behaves more collaborative in negotiations. Moreover, negotiator discretion is different for the public- and private sector negotiators. This study found that the variations in discretion also lead to different claims from a given 'pie', while this effect is not moderated by the level of PSM of practitioners. While the behavior in our practitioner sample are very similar to findings from earlier experiments based on student samples, more research is needed to find out when, how, why and under what circumstances the behavior of experimental student-subjects deviates from practitioners.



CHAPTER 7

DISCUSSION AND CONCLUSION



INTRODUCTION

The goal of this dissertation was to understand if, and how individual and sectoral differences cause variations in negotiations and negotiation outcomes. Negotiations are an important form of decision-making in the public and private sector. How public and private sector contexts and negotiators differ from each other in negotiation behavior and negotiation outcomes has received relatively little scholarly attention up to date. In this dissertation I focus on contextual and situational differences between the public and private sector context and on individual differences between their respective employees.

This chapter first briefly discusses the individual differences between public and private sector employees and differences in context between the public and private sector, in order to arrive at the research question that is central in this dissertation. Next, the findings from the empirical chapters and theoretical implications are summarized within the same framework of individual and contextual differences. The answers to the sub questions from the empirical chapters together inform the main conclusion of this dissertation. Finally, the theoretical, methodological and practical contributions are discussed, alongside the limitations of this dissertation and opportunities for further research.

Individual differences

A number of individual-level differences between public and private sector employees have been identified by scholars. For example, compared to private sector employees, public sector employees have higher levels of public service motivation (PSM). PSM is a set of beliefs, values and attitudes that 'go beyond self-interest and organizational interest, that concern the interest of a larger political entity and which induces through public interaction motivation for targeted action' (Vandenabeele, 2007, p. 547). High(er) PSM has been associated with an increased likelihood of whistle-blowing (Brewer & Selden, 1998), higher attachment to ethical leadership (Wright et al., 2016) and higher job performance (Brewer & Brewer, 2011), especially when these employees have contact with beneficiaries (Belle, 2013). Additionally, individuals with a lower risk propensity tend to self-select into public service jobs (Buurman et al., 2012; Pfeifer, 2011).

As negotiation settings often demand that negotiators give and take, sometimes to a larger public good, the dissimilarities in PSM between public and private sector employees are likely to influence their negotiation behavior, which in turn influences negotiation outcomes. Similarly, stating an opening offer and opting to reveal or hide strategic information can be risky in negotiations, which matter all the more when stakes are high.

In addition, negotiation literature has studied how, and under what conditions individual traits and contexts impact negotiation process and outcomes. For instance men and women negotiate differently, conditional on whether they are in a constant or variable sum negotiation setting (Bowles et al., 2005; Leibbrandt & List, 2014). Self-efficacy is known

to impact negotiator performance, meaning that negotiators who think that they are good negotiators often are more efficient negotiators (Elfenbein et al., 2008). Social value orientation, resulting in a priori preferences for pro-self or pro-social outcomes, impact negotiations (Van Lange, 1999). Pro-self-oriented individuals seem to prefer a distributive negotiation style (Steinel & De Dreu, 2004). Pro-social oriented individuals on the other hand are oriented to integrative negotiations and problem solving. Pro-social negotiators are also more satisfied with negotiation outcomes because they focus more on what others gain in addition to what they get individually (Gillespie, Brett, & Weingart, 2000). Similarly, conflict styles are a predictor of the way in which individuals approach conflict and thus the way they approach negotiations (Rahim & Magner, 1995). The BIG-5 personality dimensions (sometimes called the five-factor-model) extraversion, agreeableness, conscientiousness, openness and neuroticism have been connected to negotiation behavior (Antonioni, 1998). For example, Dimotakis, Conlon and Ilies (2012) study the fit between the negotiation setting (e.g. distributive or integrative) and the personality of negotiators based on their BIG-5. A negotiator scoring low on agreeableness, is thought to fit better in a competitive and distributive negotiation setting. A good negotiator – setting fit leads to more persistence, resulting in better outcomes (Ibid).

This dissertation distinguishes between the public- and private sector based on PSM. Because some of the personality characteristics that are important for negotiations have also been connected to PSM (see for example Van Witteloostuijn et al., 2017), they must be used as a measure of control in the analyses. Consequently, The BIG-5, risk-propensity, social value orientation and self-reported efficacy are used as a control measure in some of the empirical studies in this dissertation.

The public and private sector context

In this dissertation, the public and private sector context are thought to be different from one another. This means that besides the individual differences, public or private context will also influence negotiation processes, behavior and outcomes. For this, there are two relevant approaches, the core approach and the dimensional approach.

The core approach views the public and private sector to be different from one another as public organizations are owned by the whole or collective while private sector organizations have shareholders or a smaller group of owners (Rainey & Bozeman, 2000b). Moreover, private organizations target a limited set of goals like continuity and profitability, while public sector organizations target politically set policy goals. They target more diverse goals simultaneously and the goals can be conflicting with other policy goals. By targeting their goals, public organizations create public goods and services. Exclusion from public goods and services is usually not possible or is considered undesirable. Private sector organizations deliver their goods and services to those who want to pay for them. Public organizations are often monopolists in the sense that citizens and companies do not have the opportunity to switch. A functioning private sector market on the other hand gives clients the opportunity to choose.

Public organizations are also held to higher standards for accountability and transparency (Bovens et al., 2008). Accountability and transparency are considered to be important in the private sector as well, (see for example Van der Wal et al., 2008) but they are accountable to a limited set of individuals and the focus is more strongly on bottom line results (Mulgan, 2000b).

The dimensional approach on the other hand, maintains that public and private sector organizations differ from each other on political authority and on economic authority (Bozeman, 2004). For instance, state departments have low political authority and low economic authority, making them score high in 'publicness'. Private companies have high political authority (low interference) and high economic authority as they answer to themselves or stakeholders, making them score low in publicness. The dimensional approach offers the advantage of being able to position organizations relative to each other. A downside is that it lacks precision and more dimensions have been identified in addition to political and economic authority that may equally matter (eg. Moulton, 2009).

Clearly, the contextual organizational differences impact the way work is carried out in the two sectors. These differences impact the way employees perform their duties. The differences between sectors could for example serve as boundaries. The expectation for public organizations to be transparent and accountable may lead to a strategic disadvantage in cross sectoral negotiations as they have shared information about budgets and policies. Similarly, the differences between sectors could serve as an opportunity. The monopolistic character of many public organizations could be seen as a source of negotiation power as opponents have few or no alternatives. This in turn could put private sector negotiators at a strategic disadvantage. Negotiation literature has for example focused on contextual factors such as time pressure and the way it impacts how negotiators make decisions and thus what negotiation outcomes are achieved (Malhotra et al., 2008). Other contextual factors that have been studied are cultural aspects of organizations and the effect of the differences in ideologies when negotiators are from various countries (Salacuse, 1988).

The impact of sectoral differences for public and private sector negotiators have received little scholarly attention but these will impact negotiation behaviors and outcomes. Although individual differences in motives, attitudes and values cause different behaviors in both sectors, little scholarly attention has been devoted to finding out if and how these differences also impact negotiation behaviors and consequently, negotiation outcomes. Therefore, this dissertation aims to answer the question: *What are the differences between public and private sector negotiations in terms of sector context, negotiation behavior and negotiation outcomes?*

This dissertation is based on five empirical studies. The chapters can be read independently but together answer the main research question of this dissertation. The empirical chapters deal with individual and contextual characteristics as an influence on negotiation behavior and outcomes. Whether PSM causes negotiators to cooperate more is investigated first in Chapter 2. Next, Chapter 3 tests if variations in negotiation discretion affect

negotiation outcomes and whether PSM moderates this relationship. In order to see if public accountability affects the performance of coalition negotiations, we carry out two tests. First, we test if accountability affects coalition formation and negotiation performance at the group and individual level in Chapter 4. Next, we test if PSM moderates this relationship in Chapter 5. In Chapter 6, the experiments of Chapters 2 and 3 are replicated with practitioners.

EFFECTS OF INDIVIDUAL DIFFERENCES FOR NEGOTIATION BEHAVIOR AND OUTCOMES

While differences between public and private sector employees have been studied extensively, this work has not been extended to negotiations and individual negotiation behavior. Public and private sector employees differ from one another in reported risk propensity (Bozeman & Kingsley, 1998; Tepe & Prokop, 2018; Wildavsky & Dake, 1990), trust (Tepe, 2016), values (Van der Wal et al., 2008) and Public Service Motivation (Perry & Wise, 1990; Vandenabeele, 2008). The differences between public and private employees may cause variations in their tendency to collaborate or to compete, which in turn impacts negotiation outcomes. PSM consists of four latent dimensions such as interest in politics, contributing to a public good, self-sacrifice and compassion (Perry & Wise, 1990).

As public sector employees have higher levels of PSM on average, we test if this leads to higher levels of cooperation in a negotiation setting and if this cooperation is conditional on the PSM of their opponents. This was tested in Chapter 2 by carrying out a laboratory experiment, in which we placed people in randomly matched dyads in which they played a repeated public goods game. In this experiment, we vary the composition of negotiator dyads in high – high PSM dyads, high – low PSM dyads and low – low PSM dyads. By doing so, we show that the level of cooperation is not moderated by the composition of the negotiation dyads. This means that the level of cooperative behavior is not affected by the level of PSM of the negotiation opponent.

The results of the experiment in Chapter 2 indicated that, as expected, PSM is different for the student subjects enrolled in a public administration study program versus students enrolled in a business administration study program. The experiment also confirmed our expectation that negotiators with high(er) levels of PSM cooperate more on average. Therefore, research question from Chapter 2: *Do people with high public service motivation behave more cooperatively than people with low public service motivation in repeated negotiations?* can be answered with yes. In addition, we found that negotiators with high(er) levels of PSM show more cooperative behavior regardless of the PSM of the opponent. According to some, work in the public sector requires cooperative behavior as this facilitates problem solving behavior (McNamara, 2012; O'Leary & Bingham, 2009). Our study shows that high PSM individuals will choose to cooperate regardless of requirements of the context or opponents.

Cooperation in negotiations increases the odds of finding agreement (Halpert, Stuhlmacher, Crenshaw, Litcher, & Bortel, 2010). One of the potential consequences is that finding agreement is prioritized over finding a desirable agreement by high public service motivated individuals.

Post hoc measures of individual differences

Besides PSM, other individual characteristics were tested. Many experiments have shown that men and women negotiate differently (see for example Leibbrandt & List, 2014). In the experiments in Chapters 2,3, and 6, the behavior of men and women also deviated, leading to variation in negotiation outcome. This finding (re)confirms that gender is a meaningful measure of statistical control when the research focus is not on differences in gender.

Self-reported conflict style has been identified as an indicator of behavior in negotiation settings (Rahim & Magner, 1995). The conflict style measure results in modes of conflict such as accommodating, cooperating, competing, avoiding and compromising that individuals tend to when confronted with conflict (Rahim & Magner, 1995; Shell, 1974). Negotiators who scored high on the competition dimension, cooperated less in the experiment in Chapter 2. Also, whether the subjects were motivated pro-socially or pro-self was measured using a decomposed game in the experiment in Chapter 2 and 6 (Murphy et al., 2011). Pro-social motivated negotiators are for example more engaged in problem solving in variable sum negotiations and more focused on achieving common outcomes (De Dreu, Weingart, & Kwon, 2000). In the experiment in Chapter 2, there is no effect of pro-self or pro-social motivation. In the experiment in Chapter 6, there is a positive (post-hoc) relation found between pro social motivation and cooperation in the public goods experiment. Moreover, PSM correlates with a cooperative conflict style. Our outcomes seem to suggest that both PSM and conflict style are important characteristics for negotiation behavior when comparing public and private sector negotiators.

The BIG-5 measure of personality was also measured in the experiment in Chapter 3 and risk propensity (RTI) was measured in the experiments in Chapters 3 and 6. There is a positive significant correlation between PSM and agreeableness and openness in the experiment in Chapter 3. This finding resonates with earlier work by Witteloostuijn et al. (2017) who found that 1) openness is related to the attraction to policy making, 2) agreeableness is connected to the compassion and self-sacrifice and 3) commitment is related to the public interest dimensions of PSM. In the experiment in Chapter 3 however, PSM nor the BIG-5 dimensions had a significant impact on the behavior of negotiators (Antonioni, 1998).

Risk propensity did have an effect on the outcomes in the experiments presented in Chapters 3 and 6. Public sector employees are often claimed to have a low tolerance for risks (Wildavsky & Dake, 1990). The risk aversion of public servants has been confirmed using lottery games in an online questionnaire (Buurman et al., 2012). Recent findings however suggest that public servants report to be more risk averse, but do not display this behavior (Tepe &

Prokop, 2018). In the public goods game experiment with practitioners in Chapter 6, we found that risk takers contribute more on average in a public goods game both when PSM is low and when PSM is high. For high-PSM individuals however, the difference between high and low risk takers is larger for their contributions. In sum, we do find observable differences for self-reported risks. Risk aversion may lead to lowered information exchange in variable sum negotiations, which may complicate finding a mutually desirable agreement.

EFFECTS OF CONTEXTUAL DIFFERENCES ON NEGOTIATION BEHAVIOR AND OUTCOME

To test the effects of the differences in public and private sector contexts, two contextual differences are studied in depth in this dissertation: discretion and accountability. Chapter 3 looks at negotiator discretion as a situational factor of negotiations. The main question in Chapter 3 is*: Do variations in negotiator discretion lead to different outcomes for public versus private sector employees?*

From the perspective of game theory (see for example Von Neumann & Morgenstern, 2007), it is expected that more discretion does not lead to different outcomes nor better performance (Luce & Raiffa, 2012; Peters, 2010). Discretion in a negotiation set can be modeled as variations in the number of options within a negotiation space. A larger negotiation space results in more discretion and there is more potential to find a solution. According to game theory, the solution itself is not dependent on the amount of discretion for the negotiators. The solution to the negotiation problem remains the same (Driesen, Perea, & Peters, 2011; Kalai & Smorodinsky, 1975; Nash, 1950).

Management literature on the other hand, shows that more discretion for employees as well as for teams of employees leads to more productivity and that managers with more discretion display a greater variety of in and extra-role behaviors (Gellatly & Irving, 2001; Graham, 1992; Leach et al., 2005; Strain, 1999). On average, employees in the public sector context are thought to have less discretion than employees in the private sector. This is especially the case for street-level bureaucrats, whose discretion has been associated for example with their willingness to implement policies (Tummers & Bekkers, 2014; Tummers et al., 2012).

The two opposing theoretical predictions provide us with a critical test. We expect that variations in discretion causes variations in negotiation behavior and outcomes. And as public sector employees are often assumed to have less individual discretion as they operate in the context of the public sector, we expected that the effect of discretion on negotiation behavior and outcomes is stronger for public sector employees.

By placing negotiators in low-, medium-, and high discretion negotiation dyads, we tested if discretion impacts the variability of negotiation outcomes. For this, we used a

dynamic and computerized variable-sum negotiation game, in which the negotiators made offers and counteroffers to split a surplus. The results show that negotiation solutions vary with the size of discretion of negotiators. This finding aligns with the theoretical predictions from management literature that indeed variations in discretion impact negotiator outcome. In the small discretion condition, negotiators agreed on a larger sum of the surplus. Put differently, the total sum of what two negotiators in the dyads agreed on, is the largest - relatively – in the small condition. One possible explanation is that when negotiators have little discretion, the value of the assets is higher (because the supply is limited). Also, negotiators with more discretion agreed on smaller surplus sizes. The findings seem to indicate a non-linear relation between negotiator discretion and agreed outcomes.

A second finding is that the relationship between discretion and negotiation outcomes is not moderated by the PSM of individual negotiators, meaning that the effect of discretion on negotiation outcomes is not stronger or weaker for public sector employees. Hence, the research question of this chapter is answered both yes and no. Yes, negotiation discretion affects negotiation outcomes. No, this effect is not moderated by the level of PSM. In other words, there is no difference between public and private sector negotiators based on PSM in this experiment.

Chapters 4 and 5 focus on accountability as another important contextual difference between the public and private sector. Accountability is typically seen as a cornerstone of modern democracies that prevents corruption of those who are in power. Accountability has been claimed to increase trustworthiness, to enhance integrity and to increase performance (Bovens et al., 2008). Critics mention that holding people accountable may lead to window-dressing and that it generates task overload for public servants (de Wolf & Janssens, 2007). Additionally, negotiators in simple negotiation settings who are held accountable show lowered performance, while the effects of accountability on more dynamic coalition settings have not been tested before. In Chapter 4, the question: *does public accountability lead to different coalitions and lower negotiator performance in coalition negotiations?* is answered. Specifically, we proposed that accountability lowers performance at the group level, it leads to less inclusive coalitions or to no-deals and accountability invokes sanctioning behavior by the accountability forum, especially in the case of poor negotiator performance.

To address this question, a face-to-face coalition negotiation game was used. The negotiation task was to negotiate and form a coalition. The coalition outcomes all have different payoffs, resulting into a scorable negotiation game. This game was played in two experimental conditions: an accountability and a no-accountability condition. In the no-accountability condition, the negotiators negotiated in triads and scored their outcomes. In the accountability condition, the negotiators negotiated in triads and were held accountable for their actions. Next to this, the accountability fora had sanctioning power.

The empirical findings in Chapter 4 suggest that indeed accountability lowers group performance, accountability leads to fewer coalitions that include all actors present and that accountability leads to more no-deals. Additionally, accountable negotiators who performed poorly were more likely to be sanctioned by their forum while reaching a no-deal was not associated with higher odds of being sanctioned. The answer to the research question in Chapter 4 is, yes, imposing accountability mechanisms on negotiators, while negotiating a coalition, leads to lowered group performance. It leads to negotiators opting for smaller coalitions, that include fewer parties, and it leads to increased odds of not reaching agreement.

This finding is particularly interesting as it shows that imposed accountability does not only create side-effects that are considered undesirable such as window dressing and an increased workload (Wolf. de & Janssens, 2007), it also has the potential to reduce the performance of the core process. Also, many projects like infrastructural public-private-partnerships are a coalition of public and private sector organizations (Klijn & Koppenjan, 2000). Accountability regimes differ for public and private sector negotiators in those projects, implying that the performance of those networks will not only be reduced as a consequence of accountability, it also suggests that the performance will be different for public and private setting negotiators because of the contexts of the negotiators.

The findings from Chapter 4 showed that accountability exerts a strong influence on the outcomes of coalition negotiations, but it does not show whether public and private sector negotiators respond similarly to imposed accountability. Employees from the public and private sector both emphasize the importance of accountability in their work although public sector employees find it a more important value (Van der Wal et al., 2008). If indeed these values lead to different behavior in negotiations, then exposing public and private sector employees to accountability should highlight these differences.

We designed a factorial, face-to-face negotiation experiment, in which the subjects were asked to negotiate a coalition. The participants were randomized over a condition in which negotiators were accountable, and one in which they were not. In addition, subjects who were oriented towards the public sector and those who were oriented towards the private sector based were placed in two groups. This allowed us to test the effect of accountability on negotiation outcomes, as well as testing whether this effect is different for public and private sector negotiators.

Again, the findings show that accountability lowers performance. This is in line with earlier studies that focus on the effects of accountability on negotiation outcomes in teams or in more static negotiation settings (Klimoski, 1972; O'Connor, 1997). However, the results are similar for those oriented towards working in the public sector and those oriented towards working in the private sector. In other words, there is no difference for public and private sector-oriented employees, when it comes to the type of coalitions that are formed or the group performance. Therefore, the research question from Chapter 5: 'Are responses to accountability different for public/private sector negotiators?' is answered with no.

The findings imply that there is no interaction between PSM, imposed accountability and negotiation outcomes. One possible explanation is that the weight that public sector-oriented negotiators attach to accountability as a value does not translate into a valuation of externally enforced accountability. In other words, the accountability is stringent and enforced externally, while extrinsic stimuli such as rules are thought to be less effective in high-PSM individuals. This is comparable to the findings from Jacobsen et al. (2014), who found that strong perceived external obligations for school teachers crowded out their internal motivation based on PSM. A different explanation is that PSM refers to a distal and unidentified beneficiary like society as a whole while both the accountability setting as well as negotiations are more proximal (Vandenabeele et al., 2018).

The studies in Chapters 2 to 5 are empirically based on experimental designs with a mix of graduate and undergraduate students as subjects. Public administration and business administration students are used as proxies for public and private sector employees. The main rationale for this choice is that compared to business administration students, public administration students have higher levels of PSM (Perry, 1996; Vandenabeele, 2008). This situation is mirrored in the practice of the public and private sector where PSM varies for professions (van Loon, Leisink, & Vandenabeele, 2013).

While experiments using students provide a good testing ground for theories in the laboratory, critics argue that factors such as age, workplace socialization and experience of practitioners would lead to different results (Charness & Kuhn, 2011). For negotiations especially training and experience have been shown to positively correlate with the efficacy of negotiators (Uta & Sabine, 2011). Also, students often self-select for participation into experiments (Belot et al., 2015). Evidence comparing the behavior and motivations of self-selected to randomly selected samples is mixed thus far (Falk & Heckman, 2009; Falk et al., 2013). Studies that compare students to practitioners or to a generic population sometimes find differences between the student and practitioner samples, depending on the aim, setting, task or game and specifics of the sample composition (Belot et al., 2015). However, one could argue that a sample from the generic population is very different from a sample of practitioners too. To find out more about this for the negotiation studies in this dissertation, Chapter 6 investigates: *Can the findings from student-based negotiation experiments be replicated with practitioners?*

To answer this question, the computerized laboratory experiments from Chapter 2 and 3 have been replicated. The participants in this replication study, negotiated in a repeated public goods game (PGG) and over the division of a surplus with varying degrees of discretion. Note that this study focuses on both individual level characteristics, such as PSM, as well as on context in the form of negotiator discretion. Chapter 6 presents the empirical findings based on a small sample of practitioners from a pool of university alumni and employees from two Dutch medium-sized municipalities. The experimental test was carried out using a lab-in-the-

field experiment and for both experiments it was expected that the results would be the same compared to the student sample (See appendix Chapter 6).

The results from the repeated public goods game (PGG) show that practitioners with high PSM levels act more cooperatively than those with lower PSM levels. This effect is comparable to the student sample experiment that it replicates.

For the experiment that tests whether discretion affects negotiation outcomes, we found that negotiators who had little negotiation discretion, tended to agree to smaller claims of the total available surplus. Because the differences between the discretion levels are statistically significant (a two-tailed hypothesis), the null-hypothesis must be rejected. However, a nuance is needed. In the student-based experiment, the individuals with little negotiation discretion also differed from those with more or a lot of discretion. However, the students with little discretion agreed on larger claims, instead of smaller, as in this replication. The underlying assumption of the hypotheses was that there would be no differences between students and practitioners in terms of behavior and outcomes.

In this experiment, there is no effect of the PSM of the negotiators on the experimental outcomes. This means that the effect of discretion on the negotiators is similar, regardless of their motivations to serve the public interest. A small effect for self-reported risk propensity was found in this experiment: individuals who reported to engage in more risky activities, agreed on larger total claims in the experiment.

The answer to the research question of this chapter: '*Can the findings from student-based negotiation experiments be replicated with practitioners?*' is yes, implying that the results from student-based negotiation experiments provide a good indicator for negotiation results by practitioners.

The most important contribution of this replication study is that, despite its small sample size, the behavioral pattern in both negotiation experiments is comparable for students and practitioners. In studies that compare practitioners and student samples, both differences and similarities are often found (Belot et al., 2015). The discussion whether or not, or how use students in experiments is far from resolved (Anderson et al., 2013). For example, economics students are found to behave more rational than a generic citizens sample and for public administration studies, a sample of generic citizens would equally lead to problems (Belot et al., 2015). More replications with both students and practitioners are much needed in order to establish a robust body of evidence when it comes to testing the effects of the differences between public and private sector on negotiators and negotiation behavior and outcomes. Additionally, it seems that while there are some logistical challenges involved, using lab-in-the-field experiments provides a good testing ground that balances experimental control with variation in setting and subject samples.

CONCLUSION TO THE RESEARCH QUESTION OF THE DISSERTATION

Based on the results presented above, the question that is central to this dissertation can now be answered. This question reads: *What are the differences between public and private sector negotiations in terms of sector context, negotiation behavior and negotiation outcomes?* This dissertation found that negotiation processes and outcomes are influenced by individual characteristics as well as contextual factors.

Negotiators with higher PSM show more cooperative behavior, and cooperate unconditionally. Discretion levels alter the agreement that is reached by the negotiators, especially when negotiators have little discretion. This effect is not different for low and high public service motivated negotiators though. Negotiators do form smaller coalitions and show lowered performance when they are held accountable. But no differences are found for individuals attracted to working in the public- versus individuals attracted to working in the private sector. Consequently, the findings of this dissertation can be summarized in three main points.

Firstly, the differences between the PSM of public and private sector employees cause variations in negotiation process and outcomes. This finding aligns with public administration literature in which PSM has been found to predict why for example physiotherapists take up less profitable tasks that do contribute to a greater good (Andersen et al., 2011) and why public servants are more likely to whistle blow (Brewer & Selden, 1998). This finding is also consistent with the idea in negotiation literature that individual predispositions, values and individual motives matter for negotiation strategies and outcomes (House, Shane, & Herold, 1996; Lewicki et al., 2015). Additionally, in game theory, players are thought to have a point of disagreement and utility functions which capture individual predispositions and values (Nash, 1950; Peters, 2010). This dissertation shows that it is not only the utility functions of negotiators and some point of disagreement but also the size of the bargaining set that impacts negotiation behavior. As the size of the bargaining set is theoretically not thought to impact the outcomes, our empirical finding has important implications for game theoretic solution concepts such as the Nash bargaining set (Nash, 1950) and Kalai-Smorodinsky solution (Kalai & Smorodinsky, 1975).

Secondly, contextual and situational characteristics such as accountability cause a strong variation in negotiation behavior and outcomes. This finding may not come as a surprise to public administration scholars and provides empirical support for the idea that public-private sector differences cause differences in behaviors and outcomes. In the experiments in Chapters 3, 4 and 5, negotiators behaved differently under imposed accountability and when confronted with variations in negotiation discretion, regardless of whether they were motivated to serve the public interest or not. These findings are consistent with social psychological literature in the sense that contextual factors matter for how negotiators respond and behave (Davis-Blake & Pfeffer, 1989; Funder, 2001). For the negotiation literature,

the public-private sectoral distinction is a useful addition to the set of contextual factors that have been studied earlier, such as political ideology and legal pluralism (Salacuse, 1988) and culture (Thompson & Hastie, 1990).

Thirdly, differences in negotiation outcomes that are caused by individual differences in motivation and predisposition are dampened by contextual and situational characteristics. In negotiation experiments with higher levels of contextual realism, the individual differences in motives do not cause variations in the outcome while experiments that are more abstracted, individual differences matter for the outcome. Public administration literature does not make specific predictions about how individual motives and predispositions are moderated by variations in the public/private sector contexts. This finding may imply that individuals with high levels of public service motivation and thus a higher tendency to cooperate, may not be able to wield this in negotiations that require more competition. Similarly, this implies that negotiation behavior will differ in situations when demands are strong (such as accountability) versus when demands are weaker under otherwise equal circumstances. This finding also aligns with the idea of 'weak' and 'strong' situations that are thought to interact between personality and contextual cues (Beaty, Cleveland, & Murphy, 2001). For a long time, the negotiation literature has seen a dichotomy in which one side claimed personality characteristics to be the most important predictors of negotiation behavior (House et al., 1996). The other side claimed it is contextual factors that are more relevant (Davis-Blake & Pfeffer, 1989). This dissertation shows that this debate is a false dichotomy, as not only individual characteristics, or only context impact negotiation behavior, but rather that both interact and impact behavior (Funder, 2001, p. 200; Lewicki, 2015).

THEORETICAL CONTRIBUTIONS

This dissertation combines theoretical insights from public administration that focuses on public and private sector differences with literature from social psychology and economics that focus on negotiations. Consequently, there are contributions to all these fields. Here, the three most important theoretical contributions of this dissertation are discussed.

Firstly, this dissertation has (re)introduced the idea that negotiations are an important means of decision making, also in the public sector. Studies that focus on negotiation behavior in the public sector are scarce. Previous studies in the field of public administration focus for instance on negotiations in the realm of the EU (Tallberg, 2006) or in networks (Klijn et al., 1995). These approaches neglect the fact that not institutional actors but individual employees engage in actual negotiations. This dissertation has found that both individual motives and characteristics of employees matter for negotiation behavior and outcomes, and that sectoral differences cause variations in the outcomes.

Secondly, this dissertation contributes to the upcoming stream of behavioral public administration (Grimmelikhuijsen et al., 2017). Behavioral public administration aims to analyze individual and group behavior by taking on a micro-level perspective, based on insights from psychology and related fields (Ibid.). This dissertation contributes by not only using micro-level insights from social psychology but also from game theory to inform the hypotheses. Thus far, the application of game-theoretical insights have not entered into the mainstream public administration literature (See Scharpf, 1994 for an exception), even though its application has proven valuable in studying (international) political decision-making (Morrow, 1994; Ostrom, 1998), in businesses (Raiffa, 1982) and even the evolution of species in the field of evolutionary biology (de Waal, 2000). This dissertation shows that a good understanding of negotiations in the public sector benefits from using insights from various fields, rather than psychology only. Insights from game-theory are equally relevant for understanding and predicting negotiation behavior.

Another contribution is made to the literature that studies similarities and dissimilarities between the public and private sector (eg. Antonsen & Jørgensen, 1997; Walker, Brewer, Bozeman, Moon, & Wu, 2013). This dissertation shows that the individual differences in PSM in the public and private sector impact negotiation behavior and outcomes. For instance, individuals with high PSM levels show more cooperative behavior, which is unmoderated by the PSM level of their opponent. In Chapter 3, discretion has been used from the perspective of the dimensional approach, while there is little understanding on how discretion of employees impacts for example work performance and goal setting. Discretion is especially relevant for street-level bureaucrats (Lipsky, 1980), like social workers, police officers, doctors and teachers. However, understanding what mechanisms drive individual behavior has been somewhat limited to understanding shirking behavior and coping with policies.

Thirdly, in Chapter 3, we manipulate negotiator discretion by varying the set of negotiation solutions. This is done by adding options for the negotiator within the negotiation setting. In a way, this is similar to adding choice alternatives for negotiators. Solution concepts, such as the Nash Bargaining Solution propose the axiom of the independence of irrelevant alternatives. This means that there is only one solution to a negotiation problem, namely the point in a two-dimensional space, where the product of the players utilities are maximized (Kalai & Smorodinsky, 1975; Nash, 1950). From this perspective, negotiators are thought to agree on solutions in the proximity of this theoretical point. Our study contributes to the idea that although the alternatives are irrelevant theoretically, and even though the negotiation situation remains very similar over the experimental conditions, the outcomes showed variation as a result of negotiator discretion, and thus the set of negotiation solution in game theoretical terms. The findings show that the theoretical predictions resulting from the Nash bargaining solution must be relaxed empirically. The alternative solution, as proposed by Kalai and Smorodinsky (1975) may provide a more precise solution concept but requires further empirical testing.

In Chapter 4, we contribute to the negotiation literature by using a coalition negotiation game as a descriptive framework. The framework describes the values of the negotiator's utilities for the reached agreements and thus focuses on predicting which coalitions are formed. Our empirical findings show that imposed accountability lead to 1) different strategies by the negotiators and 2) consequently, that accountability leads to reduced performance in coalition negotiations. Similarly, more agreements were reached when the negotiators were not held accountable in the experiments from Chapters 4 and 5 while in both cases, the games were coreless (Parkhe, 1993; Song & Panayides, 2002). This suggests that the higher value for every alternative agreement is lowered by externally enforced accountability, while all agreements are more attractive than reaching no deal. Why and how this mechanism works requires additional theoretical and empirical work.

METHODOLOGICAL CONTRIBUTIONS

The research question in this dissertation asks if and to what extent individual characteristics and elements of the public context cause variations negotiation behavior and outcomes. Because experimental designs are particularly useful in identifying causal mechanisms, this dissertation uses a series of experiments to answer the central research question (Morton & Williams, 2010). Laboratory experiments, laboratory-in-the-field experiments and face-to-face classroom experiments are used in the empirical chapters for testing the hypotheses. By using different types of experiments, experimental designs and experimental subjects, a number of important methodological contributions can be presented.

The first methodological contribution is the use of a combination of 'high control' experimental designs for measuring behavior at the micro level: laboratory experiments, laboratory-in-the-field experiments and face-to-face classroom experiments. This dissertation responds to the many calls for more experimental designs as a way of producing more robust knowledge and disentangling causes from consequences (Bozeman & Scott, 1992; Margetts, 2011; Morton & Williams, 2010). The benefits that experimental designs offer, such as high internal and construct validity, the potential to draw causal inferences and to test theories have until recently not gained the interest of scholars in the field of public administration (Bouwman & Grimmelikhuijsen, 2016; Li & Van Ryzin, 2017). One explanation for this is that scholars in the field of public administration have disregarded internal validity for the sake of external validity and a 'felt need to provide immediate prescriptions for action' (Bozeman & Scott, 1992, p. 294). More recently, the experimental method has gained popularity. This has led to studies that use experimental designs to study governmental performance (Belle, 2014), the effects of transparency on citizen trust (Grimmelikhuijsen & Meijer, 2012), co-production (Fledderus, 2015; Jakobsen & Andersen, 2013) and decision-making biases (Olsen, 2013), all in the realm of the public sector. However, most of those experiments are survey experiments

or vignette studies (Bouwman & Grimmelikhuijsen, 2016; Li & Van Ryzin, 2017). Survey experiments are a good choice when it is the explicit aim to test motives, intentions and values as well as checking for demographics and the socio-economic status of respondents.

Survey experiments are much less suited to test behavior of the participants because they do not enable them to display actual behavior. While intentions and behavior are connected, they cannot be translated directly. For instance, in a meta-analysis based on a selection of meta-analyses that focus on a range of behavioral theories such as reasoned action and motivation theory, intentions predict only 28% of the variance in prospective studies (Sheeran, 2002).

One of the particular problems is that choices made in survey and vignette experiments do not have real consequences for the participants. How intentions, motives and values impact behavior is part of a long standing discussion (cf. Ajzen, 2011; Armitage & Conner, 2001; Sheeran, 2002). Testing intended behavior where the research objective is to find answers about behavior itself results in low construct validity, rendering findings unreliable and making generalization pointless. An example would be to test the decision 'behavior' of managers or citizens by means of a vignette-experiment. The operationalization is captured in hypothetical situations, without consequences, repercussions or payoffs and costs for the subjects. Since these factors are absent, they are not considered when making decisions, resulting in biased decisions. Because of the laboratory, lab-in-the-field and classroom experimental approach, this dissertation does not suffer from the lowered construct validity that many 'behavioral' survey-experiments suffer from.

A second methodological contribution is that this dissertation varies experimental control by using lab, lab-in-the-field and face-to-face classroom experiments. The experiment in Chapter 2 is based on a negotiation game that is almost void of context in terms of negotiation task, realism and payoffs (Chapter 2). In steps, realism is added to the experiments in this dissertation in the form of more realistic negotiation tasks, face-to-face negotiation and information density for negotiators (Chapter 4 and 5). This way, the level of (contextual) realism and thus ecological validity is systematically increased over the series of papers and thus over the dissertation. Consequently, this involves accepting a systematically lowered experimental control. By combining different experimental designs and techniques, this approach alleviates the drawbacks of individual experimental techniques.

The third contribution is that two experiments are replicated in this dissertation and that this replication is carried out with a practitioner sample. Replication is a core element of scientific progress because it enables building on knowledge, instead of moving from one shot finding to the next. Replications do exist in the field of public administration but are still relatively rare (Walker et al., 2017). In fact, some have argued that the relative void of replications in some fields of social sciences is hurting and frustrating scientific progress altogether (van Witteloostuijn, 2016). The experimental studies in Chapters 2 and 3 were carried out in a university computer laboratory with samples of student participants first. Next,

the experiments were replicated, using a mobile laboratory with practitioners, comprising a lab-in-the-field setting.

Not only does this dissertation contribute to the field methodologically by presenting its own replications, it does so by additionally using practitioners as participants in the replication study in Chapter 6. Experiments, and especially student-based experiments have been and are still continuously being criticized for using students participants (Benz & Meier, 2008; Sears, 1986). The empirical evidence supporting these claims is scattered and inconclusive (Druckman & Kam, 2011; Falk & Heckman, 2009). The point critics make is that because students usually self-select into experiments and students are homogenous on characteristics such as age and education the results cannot be reliable (Druckman & Kam, 2011). As a consequence of their low age, higher education and relative inexperience students will probably behave differently compared to a target population such as public managers, politicians or decisionmakers (Falk & Heckman, 2009). As such, it is argued, student-based samples negatively impact the external validity of experimental findings.

However, in statistical terms, a homogenous subject sample like a student-sample, is preferable to a heterogeneous sample because it does not assume (ex-ante) that the magnitude of the main effect depends on some exogenous influence. See for instance Druckman and Kam (2011) who simulate this problem for an OLS-regression model. From this, they conclude that when a true data generating process produces a single treatment effect, 'the estimates from any sample will generate an unbiased estimate of the underlying treatment effect' (Druckman & Kam, 2011, p. 11). This means that if the treatment is the same in case of a student sample, a sample of practitioners or random sample of citizens, the experiment produces an unbiased treatment effect.

Additionally, critics have focused on the limited representativeness of students for a target population and have argued that generalizations cannot be made. However, this is an unnuanced view of what generalization means and requires. Generalizability refers to the idea that findings must hold over time, contexts and over variations in persons (Shadish et al., 2002, p. 83). Moreover, some have pointed out that it is not the generalizability of a single study but rather that generalizability should be assessed based on a series of studies on a topic (Druckman & Kam, 2011; McDermott, 2002). This dissertation produces a series of studies that focus on negotiations, with a variation of experimental subjects.

There are many other often mentioned arguments by critics against the use of laboratory experiments and students in the laboratory. Firstly, the stakes are usually lower than in real life situations, but the findings on varying the stakes experimentally are mixed and seem to depend on experimental context (Falk & Heckman, 2009). Also, it is impossible to determine what a 'right' level of stakes would be. Secondly, the number of observations is small. However, this can only effectively be argued in light of the effect sizes of the findings. Conversely, sample sizes that are too large are problematic in experiments as many covariates will be statistically significant, while they are not significant in meaning (Sullivan & Feinn, 2012). Thirdly, the

participants are inexperienced (a variation of the student-sample point). However, studying the effect of experience is usually not the aim of experiments, while learning effects have been well documented (Cooper, Kagel, Lo, & Gu, 1999). A Hawthorne effects exists because subjects feel they are under study. But, based on re-analysis of the data, the Hawthorne effect did not exist in the Hawthorne studies (Falk & Heckman, 2009; Jones, 1992) . Fourthly, self-selection into the laboratory will distort the findings as those who come to the laboratory share certain characteristics (Belot et al., 2015). Despite the fact that a selection bias is not unique for the laboratory setting as other methods may suffer equally under self-selection, experimenters usually collect additional background data that enables comparing and studying these effects. In this dissertation, many covariates were considered, such as age, gender, self-reported negotiator efficacy, the BIG-5 personality characteristics, risk propensity and social value orientation.

Many of these critiques originate from a limited or flawed understanding of experimental designs (Falk & Heckman, 2009). Some of these however present scholars with practical issues. For instance, to study if and how experience or socialization of negotiators impacts the experimental findings, one needs to find an appropriate subject sample of practitioners. Also, practitioners are not easily persuaded to participate in lab-experiments at university locations. To overcome these critiques, we used a mobile laboratory to carry out a so called lab-in-the-field experiment (Morton & Williams, 2010). This was done using samples of practitioners from municipalities, private sector companies and consultancy firms. By using a mobile laboratory, a more 'representative' sample can be used in the same or similar experiments for testing theories in a location that is natural to the participants. The particular contribution of this approach is that this dissertation is based on a more robust body of evidence because of the replications carried out (Walker et al., 2017). And for the negotiation studies that were replicated in this dissertation, the differences between the student sample and the sample of practitioners proved to be very limited.

LIMITATIONS AND AVENUES FOR FUTURE RESEARCH

Before discussing the conclusion of this dissertation, the limitations of this dissertation are highlighted. Due to the variations in experimental designs in this dissertation, the limitations below may apply in varying degrees to the individual chapters, but rather apply to the dissertation as a whole. Below, one methodological, two theoretical points and one metatheoretical point are discussed which also provide opportunities for future research.

The studies in this dissertation are strong on internal validity, at the cost of reduced external validity, which limits statistical generalization. The main question that follows, is how the results can be generalized over time, contexts and to practitioners. Despite the limited sample

size, the replication study (in Chapter 6) suggests that negotiation outcomes of experiments with practitioners are quite similar to those with student subjects in this dissertation.

Also, laboratory experiments limit the level of realism for the participants. Thus, the negotiation games require artificial stimuli. This begs the question of how negotiation and negotiation outcomes can meaningfully be examined. Face-to-face experiments add more realism but this introduces exogenous influences and they are statistically noisier, introducing potential confounding variables. Lab-in-the-field experiments may provide a valuable way forward as these experiments offer high experimental control combined with a representative subject sample. Still, researchers will lose experimental control by opting for a lab-in-the field approach compared to a laboratory experiment. Consequently, a laboratory experiment using student participants are a good starting point for research (eg. Charness & Kuhn, 2011; Falk & Heckman, 2009). Future studies could focus for example on comparing similar or identical stimuli in variations of experimental designs like laboratory, lab-in-the-field and face-to-face experiments.

Secondly, this dissertation makes an archetypical and bimodal distinction between the public and the private sector, primarily based on the core approach (Antonsen & Jørgensen, 1997). Even though this is instrumental, this distinction has been criticized (Allison, 1983; Antonsen & Jørgensen, 1997; Bozeman & Bretschneider, 1994). Also, this distinction puts an emphasis on differences while it neglects or minimizes similarities between the sectors and its respective employees. Moreover, the blurring of sectors complicates this distinction as private sector organizations increasingly engage in corporate social responsibility (Holme & Watts, 1999) and public organizations sometimes operate on private markets under strict regulations.

Also, the existence of hybrid organizations or organizations at arm's length distort a meaningful classification between public and private (Denis, Ferlie, & Gestel, 2015; Thiel, 2000). On top of that, there are differences between levels of government and parts of the public sector. For instance, Dur et al. (2015) found differences in self-reported altruism and laziness for caring employees such as nurses and caretakers and employees in non-caring industries in the public sector. Parallels can be drawn for the private sector as well: negotiators in a large multinational will fit a different profile compared to a negotiator in a small startup company (Ouimet & Zarutskie, 2014).

The contextual dissimilarities like accountability or discretion of organizations in the public and private sector will vary for organizational size, organizational goals and countries. For example, accountability expectations are different for European member states and agencies (Busuioc, 2010).

Another way of thinking about this is that this dissertation has focused on the variance *between* sectoral contexts in studying negotiation behavior and negotiation outcomes. This choice entails that the variance *within* sectors has been neglected. As this dissertation is a first attempt at opening the black box of how negotiations in the public and private sector

are carried out, a more nuanced conceptualization of sectoral and organizational differences is needed to gain a better understanding. In addition, this introduces the question if and how individual characteristics, motives and predispositions such as risk propensity, the BIG-5 personality dimensions and negotiator efficacy vary between and within sectors.

Another valuable way forward would be to study other elements that distinguish public and private organizations in relation to negotiation behavior and negotiation outcomes. This dissertation focused on only two dimensions of the public-private sector divide: the effect of accountability and of negotiator discretion on negotiation outcomes. Similarly, the effect of ownership, transparency, type of budgeting and the monopolistic character of many public organizations is likely to influence negotiation processes and outcomes which require careful decomposition in the laboratory environment.

Thirdly, this dissertation focused (Chapter 2 and 6) mainly on the effect of PSM on negotiation outcomes. More differences have been found to co-vary for public and private sector employees, some of which, such as the BIG-5 personality dimensions and risk propensity have also been studied in this dissertation. Additionally, other individual characteristics and traits like gender, risk propensity, assertiveness and extraversion are well known predictors of negotiation behavior (Lewicki et al., 2015). Moreover, a recent addition to the PSM literature has been the study of the 'dark side', which are the pathological traits and motives of public servants, leading to undesired behavior (Jensen, Andersen, & Holten, 2017). Machiavellianism, narcissism, power(abuse) and locus of control are promising personality characteristics that may moderate the relationship between PSM and negotiation behavior. One promising way forward can be based on this limitation. Decisionmakers are known to differ in their responses when decisions under risk must be made for the domain of gains versus a domain of losses (Tversky & Kahneman, 1986). How negotiators respond to identical gambles embedded in a negotiation setting is thus far unclear. This is especially relevant as public and private sector negotiators already indicate themselves that they have different risk propensities (Buurman et al., 2012).

Finally, one of the discussions on PSM focuses on the idea that high PSM individuals are intrinsically motivated, but also hard to motivate extrinsically. Consequently, high PSM individuals, such as public servants are frequently argued to be willing to work for lower financial rewards, especially when their person-job fit is high (see for a discussion: Christensen & Wright, 2011; Georgellis, Iossa, & Tabvuma, 2011).

As the experiment in Chapter 2 was carried out with student participants who were financially incentivized, the effect of PSM is potentially biased as the distinction between the experimental groups is also based on PSM. All participants, those with high and low PSM were reimbursed based on their in-game performance. If the idea holds that high PSM individuals attach less meaning to financial rewards, the financial rewards themselves may have caused a more systematic variation in the outcomes. In more simple terms, incentives may cause a

confounding effect, we have not observed. An alternative version of this issue may present itself in experimental studies that have a task that appeal intrinsically to some, but less to others based on the motivation of individuals to contribute to a public good (PSM in this dissertation). This limitation calls for studies that focus on the relationship between the type of rewards in experiments and the type of task (complexity) on some measure of outcome – especially for comparing public and private sector-oriented individuals.

PRACTICAL RELEVANCE

The aim of this dissertation was to test theoretical predictions and to answer a theoretical research question. Despite the fundamental character of this dissertation a number of points for practitioners are given here.

One of the most often studied differences between individuals employed in the public sector and individuals employed in the private sector is their motivation to serve the public interest. A frequently given recommendation is that PSM should be used to market public sector organizations in the context of HR (Ritz & Waldner, 2011; Weske, Ritz, Schott, & Neumann, 2019). Some public organizations, such as the Dutch state departments have also effectively done so in the past (Steijn & Groeneveld, 2009). This dissertation found that higher levels of PSM cause higher levels of cooperation in negotiation settings. However, whether or not to cooperate depends on the negotiation aim, setting and opponent (Lewicki et al., 2015). Recruiting employees with high(er) PSM levels means recruiting high cooperators in negotiations.

In variable sum negotiations, it is generally accepted that cooperation helps finding agreement and finding it faster (Fisher & Ury, 1981). The public sector has many variable sum negotiation settings, such as finding a solution to a common policy problem, together with stakeholders for instance implementing health policies. In constant sum negotiation settings, such as buying and selling goods and services, high cooperation may however be less favorable for negotiators, depending on the rules of the negotiation.

Recommendation:

If a job description for a public employee requires negotiations within or outside the realm of the public sector, high levels of PSM should only be prioritized when cooperation is also prioritized in negotiations.

This dissertation shows that differences in negotiator discretion matter for the outcomes. This effect has been found in the student subjects in Chapter 3, as well as in a sample of practitioners in Chapter 6. Especially having relatively little discretion leads to extremes: either claiming a lot of the total available 'pie' or the opposite, claiming relatively little. While

discretion is in most cases not under the direct control of negotiators themselves, negotiators could seek information for a clearly delineated (political) mandate. This idea supports insights from management literature that awareness of a clear mandate is required to be successful (Lewicki et al., 2015). Moreover, awareness of the discretion of opponents in negotiations will increase the odds of achieving mutually desired outcomes (Ibid.)

Recommendations:

1) Negotiators should be aware of their own discretion in negotiations and check with superiors beforehand.
2) Negotiators should be aware of the discretion of their opponents as this may provide valuable information needed to reach agreement.

In Chapters 4 and 5 we present evidence that accountability severely impacts negotiation process and outcomes. When negotiators are held accountable when forming coalitions, their individual and group performance deteriorates. Moreover, the formed negotiations are less inclusive which may collide with public sector aims and goals. Individual differences in motives and personality characteristics such as PSM do not improve or worsen the effect of accountability on negotiation outcomes. This suggests that negotiators have little potential to alleviate the downward effect of accountability. To complicate things further, formal obligations of accountability are often anchored in legislation.

Recommendations:

1) Accountable negotiators are less likely to form coalitions that include all negotiators—a so-called grand coalition — because negotiators focus on their individual results. Keeping out a clear eye for the group result and vulnerable negotiators could lead to better results instead.
2) Accountable negotiators show lower group performance in negotiations. Negotiators should make clear arrangements with their superiors at what moments and how they will render their accountability for achieved negotiation results.
3) The negative consequences of accountability—such as sanctions—have little impact on the performance of negotiators when negotiations are repeated. Superiors who are not at the bargaining table should consider finding alternative means such as finding support with additional actors for achieving desired results. Similarly, political fora should consider sanctioning unwillingness and not outcomes as this may not lead to improvement.

Final conclusion

This dissertation presents a series of ground-breaking papers that focus on 1) the effects of individual characteristics of public and private sector negotiators on negotiation behavior and outcomes and 2) the effects of contextual factors such as accountability and discretion on negotiation behavior and outcomes. It is multi-disciplinary as it uses theoretical insights from public administration, negotiation literature and game theory to test what effects of the individual and contextual differences on negotiation behavior and outcomes are. It is also one of the very few dissertations that is solely based on a series of experimental designs. Furthermore, this dissertation is unique because it replicates two of the student-based experiments with practitioners. As opposed to many cross-sectional research projects in the field of public administration, this type of research provides accurate predictions of causes and effects which are much needed to enhance the scientific rigor in the discipline.

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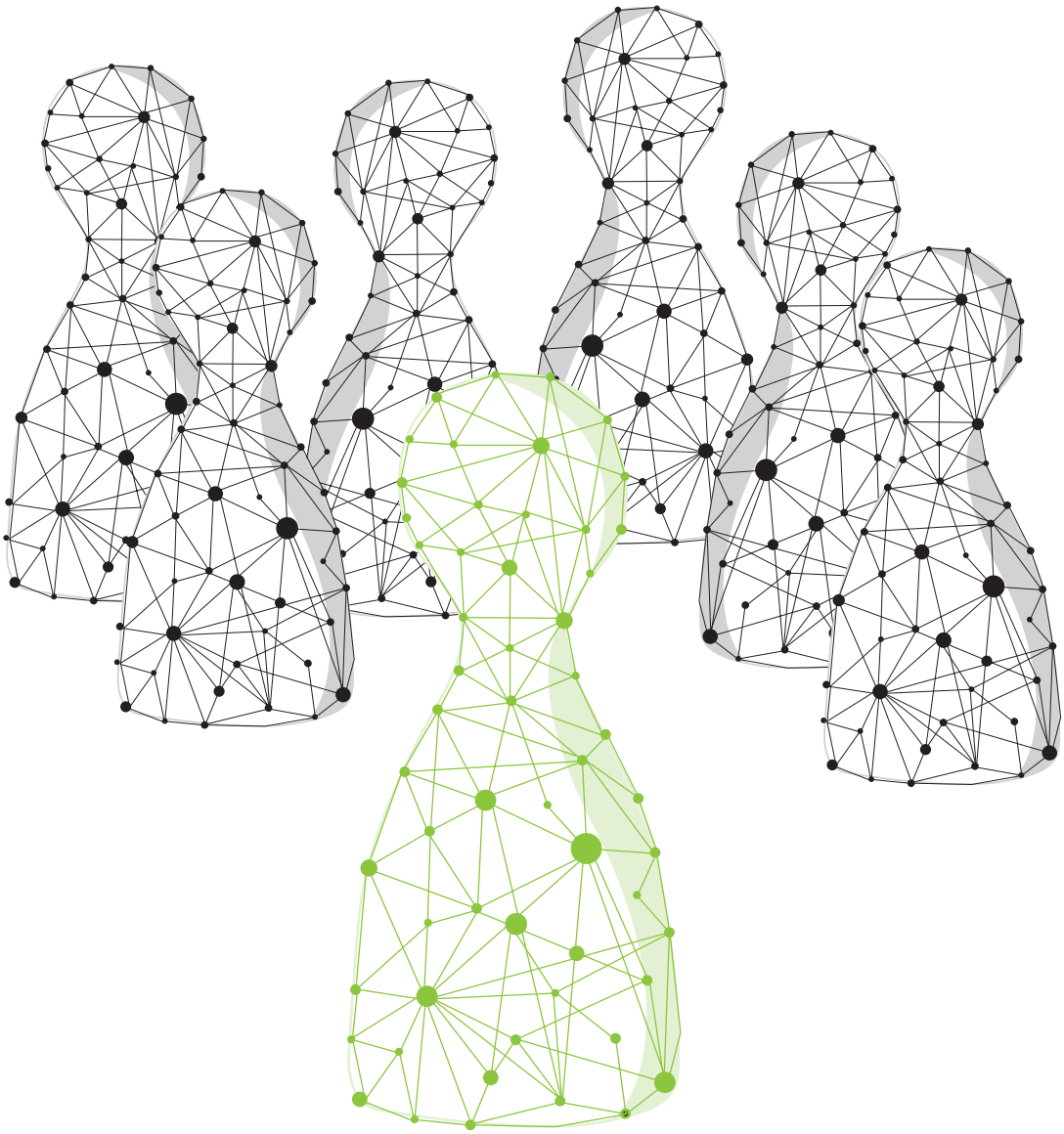

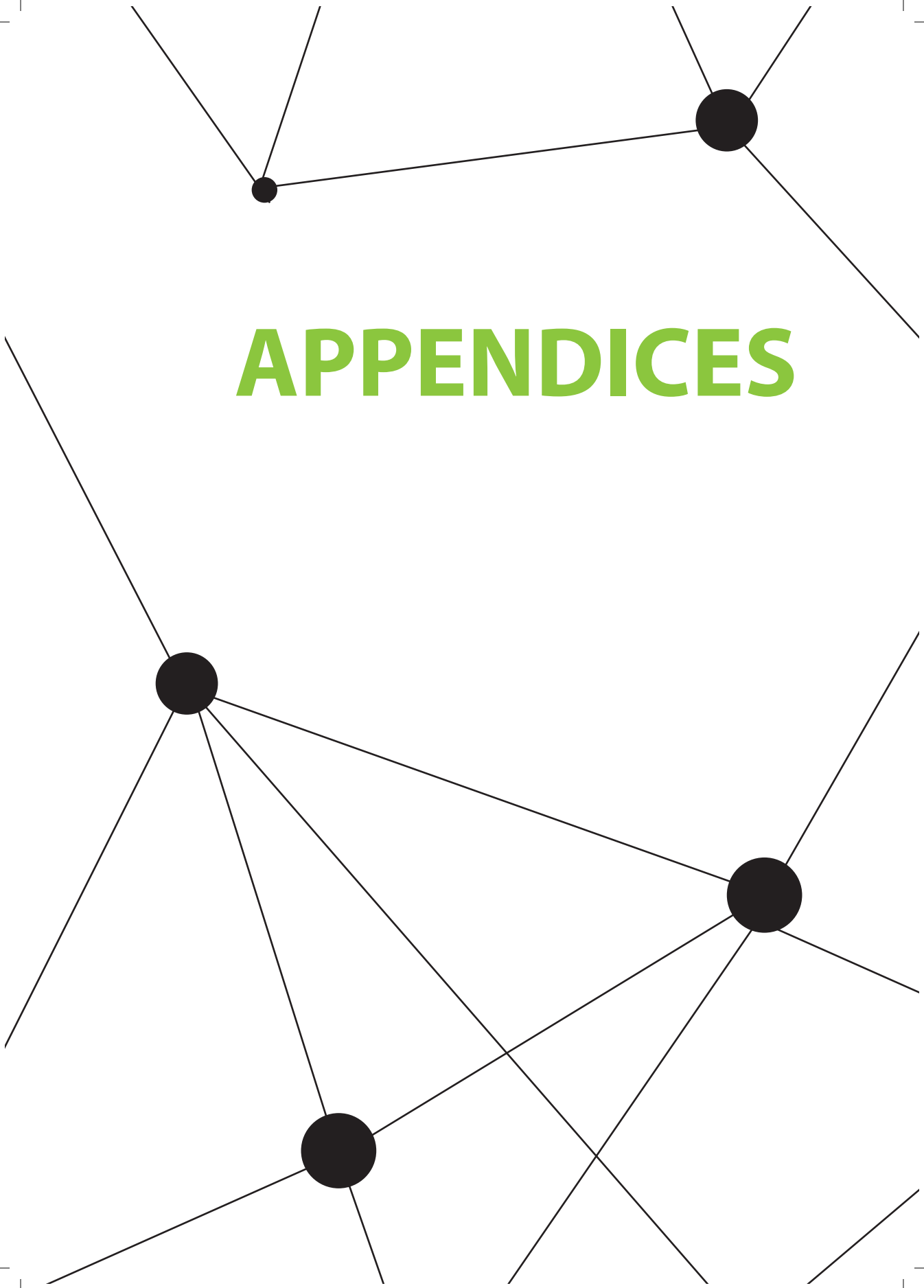

APPENDICES

APPENDICES BELONGING TO CHAPTER 1

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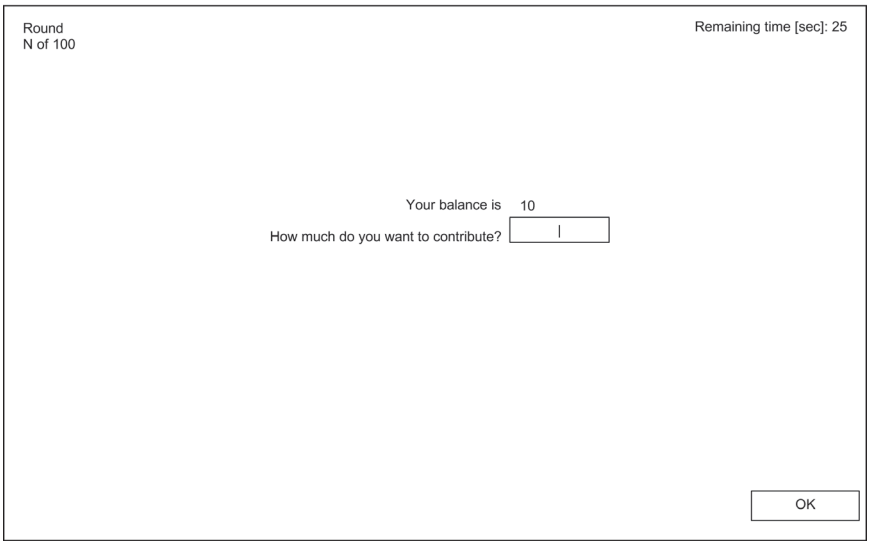
APPENDICES BELONGING TO CHAPTER 2

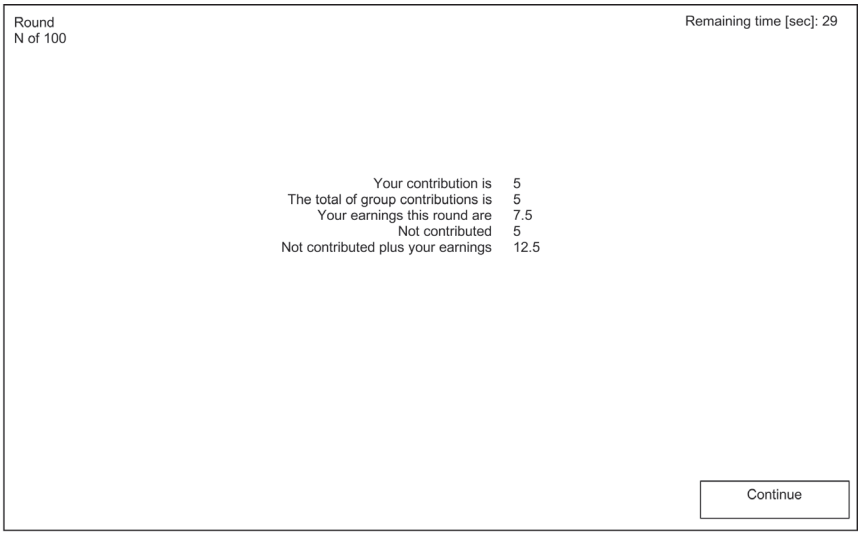
Appendix 2.1: Correlation table of post-test variables.

	High-PSM dyads	Low-PSM dyads	Mixed dyads	Age	Gender	Study	PSM	Negotiation Beliefs	Prosocial	Pro-self	ROCI Cooperating
High-PSM dyads											
Low-PSM dyads	-.50***										
Mixed dyads	-.44***	-0.55***									
Age	-0.12	0.00	0.11								
Male	0.01	-0.09	0.08	0.04							
Study	0.70***	-0.72***	0.07	-0.22*	0.15						
PSM	0.38***	-0.08	-0.29**	-0.06	0.13	0.27***					
Negotiation Beliefs	0.13	0.00	-0.13	-0311	-0.11	0.12	0.18				
Prosocial	-0.10	0.05	0.04	-0.06	-0.02	-0.09	-0.02	0.14			
Pro-self	-0.01	0.08	-0.08	0.08	0.02	-0.10	0.03	-0.13	-0.46***		
ROCI Cooperating	0.08	0.17	-0.25*	-0.02	-0.28**	-0.12	0.31***	0.11	-0.01	0.10	
ROCI Competitive	0.00	-0.10	0.10	0.11	0.18	0.06	-0.05	-0.14	-0.08	0.21*	-0.26**

Note: *p < 0.05; **p < 0.01; ***p < 0.001.

Appendix 2.2: Screens in the experimental game



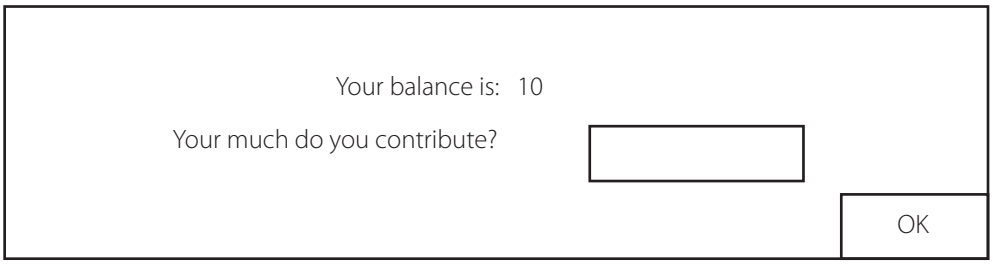


A

Appendix 2.3: Negotiator instructions (translated).

Instructions negotiation experiment

In this experiment, you are expected to negotiate. You play with one opponent, and one opponent only during the entire length of this experiment. Both you and your opponent get 10 units per round to use in the negotiation. In dyads, you are asked to contribute to a common goal. From the 10 units received, you can contribute. Your opponent can also contribute from his or her 10 units. Your contribution is deducted from your 10 units.
Both you and your opponents' contributions will be added up and multiplied by 1.5 each round. The sum is then divided over you and your opponent. You will contribute by entering the amount you want to contribute in the box and press OK. You cannot see what your opponent is contributing, nor can he/she see what you are contributing. Only when the payoffs have been calculated, you get to see what your opponent has contributed and what you both have earned.



- Note that every choice you make is of importance for your pay-out at the end of the experiment. One experimental unit translates to €0.008.
- You play against the same opponent during the entire experiment.
- This experiment has 11 rounds, with 10 decisions each. The first round is a practice round and has 10 decisions also.
- In this experiment, you are paid based on your performance.

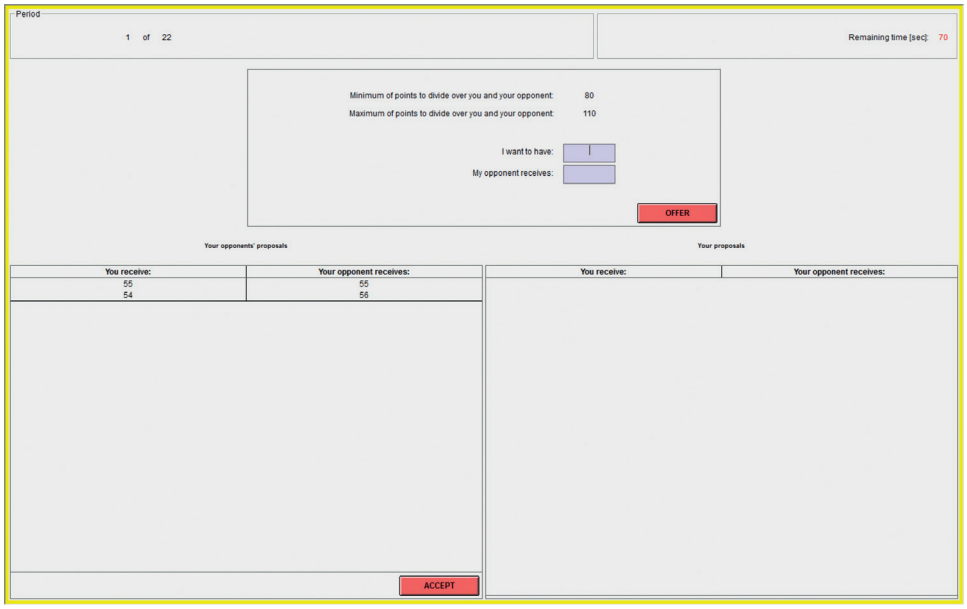
Example:
You contribute 5 from your 10 units by entering this in the text box. You now have 5 units left yourself and have contributed 5 by pressing OK. Your opponent contributes 6 units. Your common contribution is 11. After multiplication with 1.5 the total sum of contributions is 16.5. As you both will receive 1/2, you both get 8.25. You now have 13.25 units (5+8.25). Your opponent has 12.25 units (4+8.25).

-Some final notes

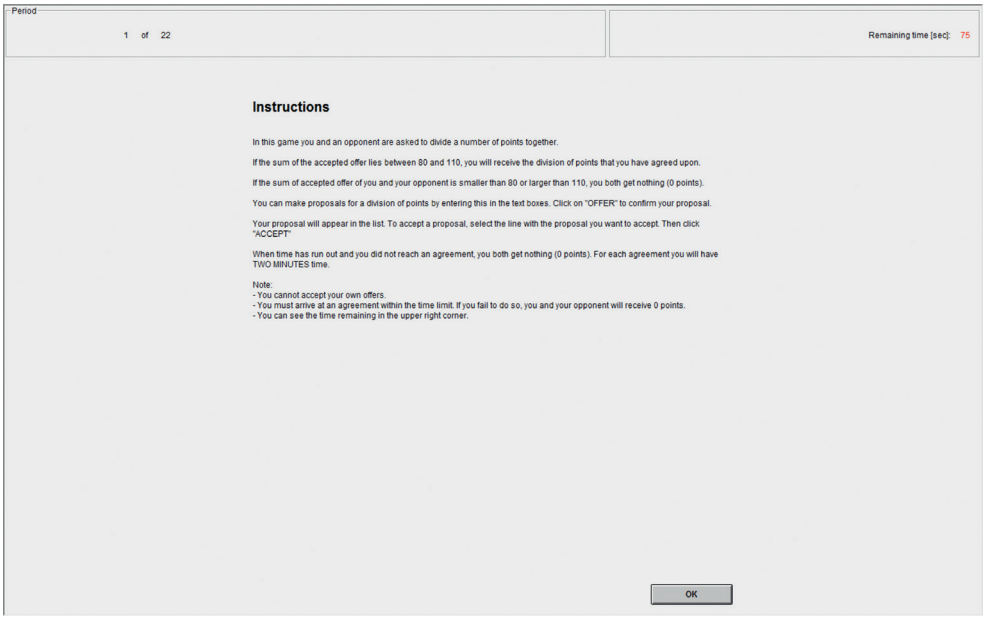
- In each round, you have to make a choice.
- 0 and 10 are also valid choices
- You participate individually to this experiment.
- You are not allowed to speak with the other participants in this room during the experiment
- It is important that you follow the instructions as precise as possible. If you have questions, raise your hand.
- You do not talk about the experiment

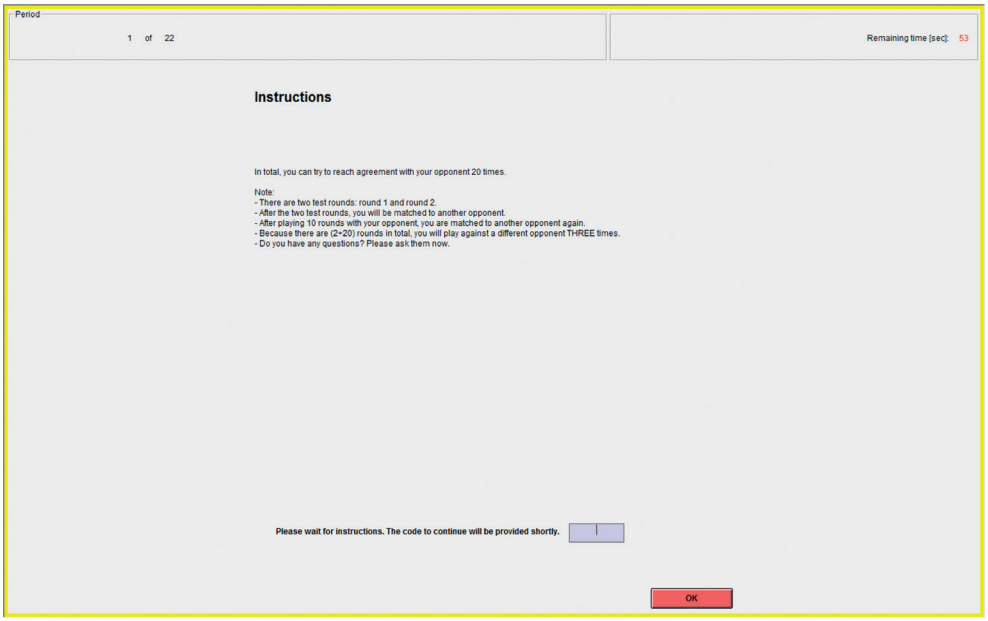
APPENDICES BELONGING TO CHAPTER 3

Appendix 3.1: screen shot offer and counteroffer during the game.



Appendix 3.2: screen shot of the participant instructions





Appendix 3.3: correlation table all variables.

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1	Experimental condition small	0.44	0.49												
2	Experimental condition medium	0.32	0.47	-0.61***											
3	Experimental condition large	0.24	0.43	-0.50***	-0.38***										
4	Negotiation score	0.37	0.11	0.26***	-0.24**	-0.04									
5	Male	0.65	0.48	-0.04	0.18*	-0.15	-0.23**								
6	Age	22.54	3.46	0.08	0.05	-0.15	0.07	-0.06							
7	Public Service Motivation (PSM) (α=0.66)	3.21	0.44	0.10	-0.17*	0.07	0.10	-0.19*	0.09						
8	BIG-5 Extraversion (α=0.83)	3.61	0.64	0.07	0.03	-0.11	-0.05	-0.06	-0.04	-0.13					
9	BIG-5 Agreeableness (α=0.66)	3.55	0.50	0.05	-0.06	0.00	0.17*	-0.10	0.08	0.41***	-0.02				
10	BIG-5 Conscientiousness (α=0.77)	3.53	0.58	0.09	-0.09	-0.01	0.04	-0.14	-0.01	0.03	0.06	0.13			
11	BIG-5 Neuroticism (α=0.81)	2.63	0.66	0.06	-0.14	0.08	0.00	-0.33***	-0.10	0.05	-0.10	-0.13	-0.03		
12	BIG-5 Openness (α=0.66)	3.51	0.47	0.15	-0.16*	0.00	0.08	0.11	0.15	0.16*	0.08	0.20*	-0.07	-0.02	
13	Risk (α=0.74)	2.02	0.54	-0.02	0.16*	-0.15	0.06	0.26***	0.24**	-0.03	0.18*	-0.08	-0.10	-0.08	0.18*

Note: ***p < .01; **p < .05; *p < .1

APPENDICES BELONGING TO CHAPTER 4

Appendix 4.1: Player instructions (Control)

Player instructions

Welcome to this negotiation game. In this game, you will negotiate with two other students. The aim is to form a coalition with one or two of your opponents. By forming coalitions, you can earn points. The negotiation itself centres around the division of these points.

On the table in front of you, there are three cards. The card on your table determines what role you have: A, B or C.
In each round, you and the other players negotiate over what coalition to form, and how you want to divide the value of this coalition. The value of the coalition is as follows:

Players	Total value of the coalition
A en B	60
A en C	40
B en C	70
A, B en C	80

Note: players that are not in the coalition, will receive nothing: no points. You are allowed to form **one** coalition only in each round.

How many points you will obtain depends on what coalition is formed and how the total value of this coalition is divided over the players (A, B and C). You and the other negotiators in your group can make proposals to form coalitions and to divide the points that result from this coalition. If the players **within** a coalition agree with de division of points within the coalition, you have an agreement. When the time has passed, you can write down the division of points on the **group-score** card on the table. Negotiations are over only when the time has passed. If you agree on a coalition before the time has passed, this agreement is only definitive when all time has passed. After time has passed, you make sure you note the score on your **group scorecard** AND on your **individual scorecard.**

For each round of this game, there is a five-minute time limit. If you do not manage to form a coalition at the moment the time passes, all players get zero (0) points.

- After each round, the positions (A, B and C) are reshuffled. When you are finished with negotiating, you await new instructions.
- If you have questions during the experiment, raise your hand. We will answer your question as soon as possible.
- Do **NOT** consult with or talk to players from other groups.
- Do **NOT** talk about the contents of this experiment with other students (e.g. What you have done)

Individual Scorecard

ID Code:_____

Round	Player A/B/C	Your score
1		
2		
3		
4		
5		
6		
	Total	

Appendix 4.2: Player instructions (Treatment)

Player instructions

Welcome to this negotiation game. In this game, you will negotiate with two other students. The aim is to form a coalition with one or two of your opponents. By forming coalitions, you can earn points. The negotiation itself centres around the division of these points.

On the table in front of you, there are three cards. The card on your table determines what role you have: A, B or C. In each round, you and the other players negotiate over what coalition to form, and how you want to divide the value of this coalition. The value of the coalition is as follows:

Players	Total value of the coalition
A and B	60
A and C	40
B and C	70
A, B and C	80

Note: players that are not in the coalition, will receive nothing: no points. You are allowed to form **one** coalition only in each round.

How many points you will obtain depends on what coalition is formed and how the total value of this coalition is divided over the players (A, B and C). You and the other negotiators in your group can make proposals to form coalitions and to divide the points that result from this coalition. If the players **within** a coalition agree with de division of points within the coalition, you have an agreement. When the time has passed, you can write down the division of points on the **group-score** card on the table. Negotiations are over only when the time has passed. If you agree on a coalition before the time has passed, this agreement is only definitive when all time has passed. After time has passed, you make sure you note the score on your **group scorecard** AND on your **individual scorecard.**

Behind/next to you is your assigned assessor. How many points this person earns depends on your performance. After ending the game, this person may note one third (1/3) of your earned points (NOT deducted from your score). Round down to 0.5 points.
This person is not allowed to speak during the negotiation and is just present as a viewer. After two minutes of negotiation, you are allowed to discuss briefly with this assessor (only with your assigned assessor). After this, you will have the opportunity to negotiate again with your opponents. Again, your assessor is silent then. In each round, the structure is as follows:

1. You negotiate 2 minutes with your opponents;
2. You discuss 1 minute with your personal assessor;
3. ou negotiate 3 minutes with your opponents.

If no coalition has been formed after the time has passed (steps 1 to 3), everyone gets zero (0) points.

After each negotiation round passed, your assessor will grade you based on your performance. If your assessor is satisfied with your performance, you keep your points (green card). If your assessor is not satisfied, you subtract two points from your round total (red card). Note your original scores in the column "original score". Also note your original score and your role on the group score sheet.
In case of a green card, this will also be your round score. In case of a red card, your round score is the original score minus 2 points.

- After each round, the positions (A, B and C) are reshuffled. When you are finished with negotiating, you await new instructions.
- If you have questions during the experiment, raise your hand. We will answer your question as soon as possible.
- Do **NOT** consult with or talk to players from other groups.
- Do **NOT** talk about the contents of this experiment with other students (e.g. What you have done)

Individual Scorecard

ID Code:_____

Round	Player A/B/C	Original score	Card	Score this round	Your role this round
1			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
2			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
3			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
4			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
5			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
6			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
			Total		

Assessor Instructions

Welcome to this negotiation game. You are assigned the role of assessor for this round. Your task will be to observe the negotiator that is assigned to you and to provide feedback to this negotiator.

The negotiators (A, B and C) will negotiate for 2 minutes. During this phase, you are NOT allowed to speak and only allowed to observe. Also, you are not allowed to discuss with the other assessors.

After this, you will have the opportunity to provide feedback to the negotiator that is representing you (1 minute). Then, another round of negotiation will follow by the negotiators (A, B and C). Again, you are not allowed to speak or interrupt.

Because you provide feedback, you are allowed to write down one third (1/3) of the points that your negotiator has earned. These points are NOT subtracted from the points of the negotiator. The more points you earn, the better for you.

You also will have the opportunity to evaluate your negotiator **after** an agreement has been reached. If you give your negotiator a **green card (**you are satisfied with the performance), he

or she gets to keep all the earned points. In this case, you tick **green** in the card column on your individual score sheet.
If you give your negotiator a **red card** (you are not satisfied with the performance), your player has to subtract two points from his original score. In this case you tick the **red (-2 pt.)** box on the score sheet.

- Over the course of this experiment, you will negotiate **three** times and you will be the assessor **three** times.
- If you have questions during the experiment, raise your hand. We will answer your question as soon as possible.
- Do **NOT** consult with or talk to players from other groups.
- Do **NOT** talk about the contents of this experiment with other students (e.g. What you have done)

Appendix 4.3: Post-test questionnaire

Questionnaire

This questionnaire focuses on a number of personal background characteristics. Your answers are never right or wrong. Do not think too long and always provide an answer. Filling out the questionnaire will take approximately 5 minutes.

ID code

1) **What is your gender?**
[ ] Male
[ ] Female

2) **What is your year of birth?**

3) **In what year did you start college?**

4) **What is your highest level of education you have achieved?**
[ ] Primary school
[ ] Complete lower secondary school, technical/vocational type (LBO / VMBO / MAVO)
[ ] Complete lower secondary school, technical/vocational type (MBO / MTS / MEAO)
[ ] Complete secondary school, university-preparatory type (HAVO / MMS / HBS)
[ ] Complete secondary school, university-preparatory type (VWO / Atheneum / Gymnasium)
[ ] Applied university college level (HTS / HEAO / Social Academy)
[ ] University level college (University BA/MA / Post-HBO)

5) How many people were there assigned to your group in total in every round (yourself included)?

6) **With how many people did you play the negotiation game in every round? (yourself included but not counting viewers)?**

7) Was there someone in your session as a personal assessor who also received points based on your performance?

[ ] Yes

[ ] No

8) **Motivation**

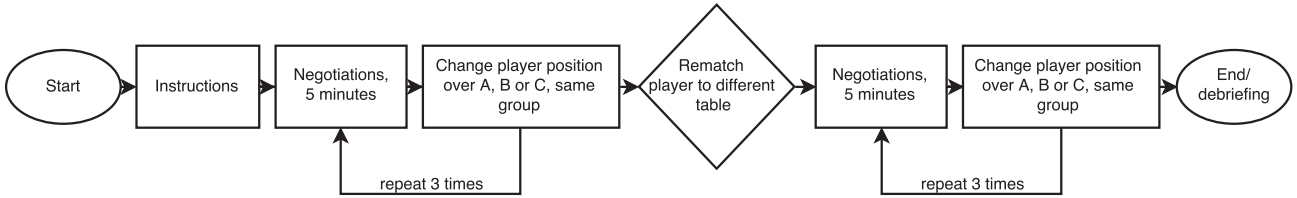
The following questions focus on motivation. Please tick the answer that applies to you best.

	Totally disagree	Disagree	Neutral	Agree	Totally agree
Politics is a dirty word	[ ]	[ ]	[ ]	[ ]	[ ]
I unselfishly contribute to my community	[ ]	[ ]	[ ]	[ ]	[ ]
The give and take of public policy-making does not appeal to me	[ ]	[ ]	[ ]	[ ]	[ ]
I would prefer seeing public officials do what is best for the whole community even if it harmed my interests	[ ]	[ ]	[ ]	[ ]	[ ]
I consider public service my civic duty	[ ]	[ ]	[ ]	[ ]	[ ]
Contributing to development and execution of public policy is important to me	[ ]	[ ]	[ ]	[ ]	[ ]
I have little compassion for people in need who are unwilling to take the first step to help themselves	[ ]	[ ]	[ ]	[ ]	[ ]
Making a difference in society means more to me than personal achievements.	[ ]	[ ]	[ ]	[ ]	[ ]
Meaningful public service is very important to me	[ ]	[ ]	[ ]	[ ]	[ ]
I don't care much for politicians	[ ]	[ ]	[ ]	[ ]	[ ]

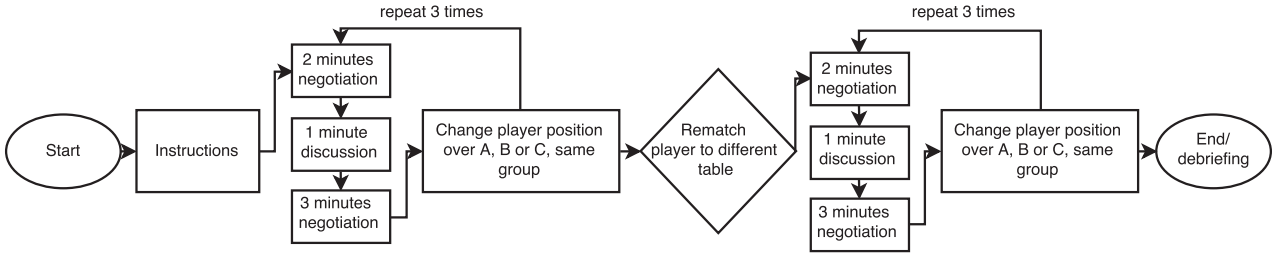
APPENDICES BELONGING TO CHAPTER 5

Appendix 5.1: The order of events during the experiment, control and treatment condition.

Control



Treatment



Appendix 5.2: Player instructions (Control) (translated)

Player instructions

Welcome to this negotiation game. In this game, you will negotiate with two other students. The aim is to form a coalition with one or two of your opponents. By forming coalitions, you can earn points. The negotiation itself centres around the division of these points.

On the table in front of you, there are three cards. The card on your table determines what role you have: A, B or C.
In each round, you and the other players negotiate over what coalition to form, and how you want to divide the value of this coalition. The value of the coalition is as follows:

Players	Total value of the coalition
A and B	60
A and C	40
B and C	70
A, B and C	80

Note: players that are not in the coalition, will receive nothing: no points. You are allowed to form **one** coalition only in each round.

How many points you will obtain depends on what coalition is formed and how the total value of this coalition is divided over the players (A, B and C). You and the other negotiators in your group can make proposals to form coalitions and to divide the points that result from this coalition. If the players **within** a coalition agree with de division of points within the coalition, you have an agreement. When the time has passed, you can write down the division of points on the **group-score** card on the table. Negotiations are over only when the time has passed. If you agree on a coalition before the time has passed, this agreement is only definitive when all time has passed. After time has passed, you make sure you note the score on your **group scorecard** AND on your **individual scorecard.**

For each round of this game, there is a five-minute time limit. If you do not manage to form a coalition at the moment the time passes, all players get zero (0) points.

- After each round, the positions (A, B and C) are reshuffled. When you are finished with negotiating, you await new instructions.
- If you have questions during the experiment, raise your hand. We will answer your question as soon as possible.
- Do **NOT** consult with or talk to players from other groups.
- Do **NOT** talk about the contents of this experiment with other students (e.g. What you have done)

Individual Scorecard

ID Code:_____

Round	Player A/B/C	Your score
1		
2		
3		
4		
5		
6		
	Total	

A

Appendix 5.3: Player instructions (Treatment) (translated)

Player instructions

Welcome to this negotiation game. In this game, you will negotiate with two other students. The aim is to form a coalition with one or two of your opponents. By forming coalitions, you can earn points. The negotiation itself centres around the division of these points.

On the table in front of you, there are three cards. The card on your table determines what role you have: A, B or C. In each round, you and the other players negotiate over what coalition to form, and how you want to divide the value of this coalition. The value of the coalition is as follows:

Players	Total value of the coalition
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Note: players that are not in the coalition, will receive nothing: no points. You are allowed to form **one** coalition only in each round.

How many points you will obtain depends on what coalition is formed and how the total value of this coalition is divided over the players (A, B and C). You and the other negotiators in your group can make proposals to form coalitions and to divide the points that result from this coalition. If the players **within** a coalition agree with de division of points within the coalition, you have an agreement. When the time has passed, you can write down the division of points on the **group-score** card on the table. Negotiations are over only when the time has passed. If you agree on a coalition before the time has passed, this agreement is only definitive when all time has passed. After time has passed, you make sure you note the score on your **group scorecard** AND on your **individual scorecard.**

Behind/next to you is your assigned assessor. How many points this person earns depends on your performance. After ending the game, this person may note one third (1/3) of your earned points (NOT deducted from your score). Round down to 0.5 points.
This person is not allowed to speak during the negotiation and is just present as a viewer. After two minutes of negotiation, you are allowed to discuss briefly with this assessor (only with your assigned assessor). After this, you will have the opportunity to negotiate again with your opponents. Again, your assessor is silent then. In each round, the structure is as follows:

You negotiate 2 minutes with your opponents;
You discuss 1 minute with your personal assessor;
You negotiate 3 minutes with your opponents.

If no coalition has been formed after the time has passed (steps 1 to 3), everyone gets zero (0) points.

After each negotiation round passed, your assessor will grade you based on your performance. If your assessor is satisfied with your performance, you keep your points (green card). If your assessor is not satisfied, you subtract two points from your round total (red card). Note your original scores in the column "original score". Also note your original score and your role on the group score sheet.
In case of a green card, this will also be your round score. In case of a red card, your round score is the original score minus 2 points.

After each round, the positions (A, B and C) are reshuffled. When you are finished with negotiating, you await new instructions.
If you have questions during the experiment, raise your hand. We will answer your question as soon as possible.

Do **NOT** consult with or talk to players from other groups.
Do **NOT** talk about the contents of this experiment with other students (e.g. What you have done)

Individual Scorecard

ID Code:_____

Round	Player A/B/C	Original score	Card	Score this round	Your role this round
1			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
2			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
3			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
4			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
5			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
6			[ ] Green [ ] Red (-2 pt)		Assessor / Negotiator
			Total		

Assessor Instructions

Welcome to this negotiation game. You are assigned the role of assessor for this round. Your task will be to observe the negotiator that is assigned to you and to provide feedback to this negotiator.

The negotiators (A, B and C) will negotiate for 2 minutes. During this phase, you are NOT allowed to speak and only allowed to observe. Also, you are not allowed to discuss with the other assessors.

After this, you will have the opportunity to provide feedback to the negotiator that is representing you (1 minute). Then, another round of negotiation will follow by the negotiators (A, B and C). Again, you are not allowed to speak or interrupt.
Because you provide feedback, you are allowed to write down one third (1/3) of the points that your negotiator has earned. These points are NOT subtracted from the points of the negotiator. The more points you earn, the better for you.

You also will have the opportunity to evaluate your negotiator after an agreement has been reached. If you give your negotiator a green card (you are satisfied with the performance), he or she gets to keep all the earned points. In this case, you tick green in the card column on your individual score sheet.
If you give your negotiator a red card (you are not satisfied with the performance), your player has to subtract two points from his original score. In this case you tick the red (-2 pt.) box on the score sheet.

- Over the course of this experiment, you will negotiate three times and you will be the assessor three times.
- If you have questions during the experiment, raise your hand. We will answer your question as soon as possible.
- Do NOT consult with or talk to players from other groups.
- Do NOT talk about the contents of this experiment with other students (e.g. What you have done)

Appendix 5.4: POST-TEST Questionnaire (translated)

Questionnaire

This questionnaire focuses on a number of personal background characteristics. Your answers are never right or wrong. Do not think too long and always provide an answer. Filling out the questionnaire will take approximately 5 minutes.

ID code

1) **What is your gender?**
[ ] Male
[ ] Female

2) **What is your year of birth?**

3) **In what year did you start college?**

4) **What is your highest level of education you have achieved?**
[ ] Primary school
[ ] Complete lower secondary school, technical/vocational type (LBO / VMBO / MAVO)
[ ] Complete lower secondary school, technical/vocational type (MBO / MTS / MEAO)
[ ] Complete secondary school, university-preparatory type (HAVO / MMS / HBS)
[ ] Complete secondary school, university-preparatory type (VWO / Atheneum / Gymnasium)
[ ] Applied university college level (HTS / HEAO / Social Academy)
[ ] University level college (University BA/MA / Post-HBO)

5) How many people were there assigned to your group in total in every round (yourself included)?

6) With how many people did you play the negotiation game in every round? (yourself included but not counting viewers)?

7) **Was there someone in your session as a personal assessor who also received points based on your performance?**

[ ] Yes

[ ] No

8) **Motivation**

The following questions focus on motivation. Please tick the answer that applies to you best.

	Totally disagree	Disagree	Neutral	Agree	Totally agree
Politics is a dirty word	[ ]	[ ]	[ ]	[ ]	[ ]
I unselfishly contribute to my community	[ ]	[ ]	[ ]	[ ]	[ ]
The give and take of public policy-making does not appeal to me	[ ]	[ ]	[ ]	[ ]	[ ]
I would prefer seeing public officials do what is best for the whole community even if it harmed my interests	[ ]	[ ]	[ ]	[ ]	[ ]
I consider public service my civic duty	[ ]	[ ]	[ ]	[ ]	[ ]
Contributing to development and execution of public policy is important to me	[ ]	[ ]	[ ]	[ ]	[ ]
I have little compassion for people in need who are unwilling to take the first step to help themselves	[ ]	[ ]	[ ]	[ ]	[ ]
Making a difference in society means more to me than personal achievements.	[ ]	[ ]	[ ]	[ ]	[ ]
Meaningful public service is very important to me	[ ]	[ ]	[ ]	[ ]	[ ]
I don't care much for politicians	[ ]	[ ]	[ ]	[ ]	[ ]

Appendix 5.5: Analysis of the coalitions at the group level

Coalitions over the length of the experiment % and (counts).

	No accountability	Accountability	Test
AB	1.2% (1)	16.7% (17)	
AC	2.4% (2)	11.8% (12)	
BC	6.0% (5)	26.5% (27)	
ABC	89.3% (75)	38.2% (39)	
No coalition	1.2% (1)	6.9% (7)	
	100% (84)	100% (102)	$X^2 = 51.09$ P=0.000

Coalitions, Business Administration % and (counts).

	No accountability	Accountability	Test
AB	0.0% (0)	19.0% (8)	
AC	3.3% (1)	4.8% (2)	
BC	3.3% (1)	28.6% (12)	
ABC	90.0% (27)	40.5% (17)	
No coalition	3.3% (1)	7.1% (3)	
	100% (30)	100% (42)	$X^2 = 19.45$ P=0.000

Coalitions, Public Administration % and (counts).

	No accountability	Accountability	Test
AB	1.9% (1)	15.0% (9)	
AC	1.9% (1)	16.7% (10)	
BC	7.4% (4)	25.0% (15)	
ABC	88.9% (48)	36.7% (22)	
No coalition	0.0% (0)	6.7% (4)	
	100% (54)	100% (60)	$X^2 = 33.56$ P=0.000

APPENDICES BELONGING TO CHAPTER 6

Appendix 6.1 Lab-in-the-field setup used for replicating laboratory experiments

Appendix 6.2 Photo lab-in-the-field session with civil servants at a Dutch municipality, Oct 11, 2017.

ENGLISH SUMMARY

The main research question of this dissertation is: *What are the differences between public and private sector negotiations in terms of sector context, negotiation behavior and negotiation outcomes?*

Negotiations have been primarily studied in the private sector. This research has for example focused on cooperation and competition (Brandenburger & Nalebuff, 2011), and on the role of information in negotiations (eg. Scholes, Wright, Westhead, Burrows, & Bruining, 2007). Negotiations have also been studied as a tool for joint problem solving (eg. Aarikka-Stenroos & Jaakkola, 2012; Graham, 1986). Less attention has been devoted to negotiations that take place in the realm of the public sector. Moreover, negotiation research does not distinguish between the public and the private sector. This is especially surprising as research from the field of public administration has established that the public sector and private sector are different from each other in for example organizational goals and contexts (Rainey, 2003; Rainey and Bozeman, 2000; Antonsen & Jorgensen, 1997). Moreover, public sector employees adhere to different values and are highly motivated to contribute to society as a whole, compared to private sector employees (Van der Wal, de Graaf & Lasthuijzen, 2008, Vandenabeele, 2008; Perry, 2000). This set of motivations leads to observable differences in behavior in situations that are the same otherwise.

These insights make the application of negation knowledge problematic while negotiation dynamics are ubiquitous in the public and in the private sector. For example, European member states negotiate over terms and conditions for further integration. Moreover, agencies, universities and railway companies negotiate over their performance with ministries. In addition, New Public Management developments have increased the use of performance agreements in the public sector (Hood, 1991). Many agreements in the public sector are arrived at by means of negotiations. As these negotiations usually involve public means, the outcomes of such negotiations can have consequences for citizens.

Based on the idea that negotiations are increasingly important in both the private and public sector, and given that there are a number of differences between the public and private sector in terms of contexts and behavior, this dissertation focuses on differences in negotiation behavior and outcomes by comparing the public and private sector.

Chapter 2 aims to test if and to what extent individuals with higher levels of public service motivation (PSM) display a more cooperative style of negotiations. PSM is a set of beliefs and attitudes that go beyond self- or organizational interest and concern the interest of a larger societal interest (Vandenabeele, 2008; Perry, 2000; Perry & Hondeghem, 2008). Earlier, public service motivation has been connected to a range of preferences but also behavior such as a higher likelihood to whistle blow – which is good for society as a whole, but usually detrimental for the whistleblower (Brewer & Selden, 1998). Individuals with high levels of public service motivation are predominantly found in the public sector, while individuals

with lower levels of public service motivation are found in the private sector (Delfgaauw & Dur, 2010). Consequently, comparing individuals with either high and low levels of public service motivation is comparing the attitudes that are predominantly found in employees in the public and private sector. Because of the higher interest in society as a whole of high PSM individuals, we expect that they will contribute more in repeated negotiations, regardless of their individual gains and regardless of the level of PSM of their opponent. Higher contributions can be seen as higher cooperation. By using a laboratory experiment with a repeated public goods game, we found that indeed individuals with higher levels of PSM contribute more and thus acted more cooperative in a repeated negotiation setting. Moreover, the level of cooperation was not dependent on the level of PSM of their opponent. The findings in this chapter suggest that overall, individuals with high levels of PSM, such as civil servants, will cooperate more in negotiations compared to those with lower levels of PSM.

In Chapter 3, we test if negotiator discretion impacts negotiation outcomes. In addition, we test if the effect of discretion on negotiation outcomes is different for high and low public service motivated individuals. The main research question of this chapter asks: Do variations in negotiator discretion lead to different outcomes for public versus private sector employees? In this chapter we test two opposing lines of reasoning, based on two different theoretical angles. From the game theoretical perspective, negotiator discretion is thought not to alter the negotiation outcomes because increasing discretion simply introduces more irrelevant alternatives for negotiators (Nash 1950; Kalai & Smorodinsky, 1975). From the second perspective, discretion is thought to have a positive relation with the productivity of employees, job satisfaction and motivation (Gellatly & Irving, 2001; Shin & Konrad, 2014). In the public sector specifically, discretion has been connected to the effectiveness and support for policies of front-line workers such as teachers and police officers (Lipsky, 1980). These frontline workers are thought to use their discretion as they see fit in order to tailor policies to the specific characteristics of situations, for instance to help clients (Tummers and Bekkers 2014; Tummers, Steijn & Bekkers 2012). As a result it is plausible that discretion will have a stronger impact on those with high levels of PSM (Van Wart, 2003).

In negotiation literature, discretion is thought to impact negotiations as negotiators experience power differently and thus use different tactics (Kim & Fragale, 2005; Babcock, Loewenstein, & Wang, 1995). Based on a variable sum negotiation game, our expectations are tested in the laboratory by exposing negotiators to three levels of discretion, little discretion, medium discretion and a lot of discretion. The findings show that discretion impacts negotiation outcomes. Especially negotiators with little discretion negotiation setting claimed more from the available surplus. This finding suggests that discretion levels of negotiators indeed influence the outcomes of negotiations. The difference between high and low PSM individuals did not moderate the relationship between negotiator discretion and negotiation outcomes.

In Chapter 4, we focus on a specific mechanism that is central in the public sector context: public accountability. The aim of this study is to see if public accountability impacts the way in which groups of negotiators arrive at a coalition. The central question in this chapter is: Does public accountability lead to different coalitions and lower negotiator performance in coalition negotiations?

Public accountability is systematically rated as an important value held by public managers (Van der Wal, De Graaf, & Lasthuizen, 2008). It is often claimed to improve performance, to enhance integrity and to reduce corruption (Bovens, Schillemans, and 't Hart 2008). Moreover, it is seen as a cornerstone of modern democracies (Bovens 2005, Bovens 2006; Bovens, Goodin & Schillemans, 2014). At the same time, accountability in negotiation settings has been known to reduce the extent to which negotiators are willing to make concessions (Ben-Yoav and Pruitt 1984). In teams, negotiators behave more competitive if they are held accountable (O'Connor 1997). The extent to which accountability also affects the performance of negotiators and the type of coalitions they arrive at is thus far unknown.

In this study, we use a face-to-face negotiation game, in which the participants are asked to form coalitions. In the treatment condition, negotiators had to answer to a personal 'forum' based on their performance. In the control condition, no accountability demands were placed on the negotiators. The findings show that negotiator performance deteriorates when forming coalitions under the influence of public accountability. Moreover, negotiators seem to opt for coalitions that include fewer opponents. Overall, accountability reduced the likelihood that an agreement was reached. These findings are particularly interesting as they challenge the idea that accountability will increase performance in the context of negotiating over a coalition.

In Chapter 5, we test to see if the relation found in Chapter 4 between accountability and negotiation outcomes in a coalition setting is different for public versus private sector negotiators. Forming coalitions is an important way of arriving at desired outcomes in both the public and the private sector, for instance in networks and public-private-partnerships (Klijn & Koppenjan, 2000). The demand for accountability has steadily grown over the years in both the public and in the private sector (Power, 1994). Public and private sector employees value accountability, while public sector employees rate it as a more important value (Van der Wal, de Graaf & Lasthuijzen, 2008). Consequently, the downward effect found in Chapter 4 could be stronger for public sector negotiators. Therefore, the main research question of this study is: *Are responses to accountability different for public/private sector negotiators?* In order to answer this question, we distinguish between individuals oriented to the public sector and individuals oriented towards the private sector based in their level of PSM. Like in the study in Chapter 4, we exposed our public and private sector-oriented negotiators to two experimental conditions. In the treatment condition the negotiators had to report to their personal forum while in the control condition, no such demands were present for the

negotiators. The experiment was carried out in a classroom setting where the negotiators could negotiate over the coalitions face-to-face.

The results from this study (re)confirm that accountability causes lower performance in coalition negotiations. Like in the study from Chapter 4, negotiators who were held accountable showed worse performance, more no-deals and included fewer constituents. This finding aligns with earlier work on the effect of accountability on variable sum negotiation settings and with teams. Contrary to our expectations, the effect of accountability on the coalition formation by negotiations was not different for public and private sector-oriented negotiators.

The specific aim of Chapter 6 is to test to what extent the findings from Chapter 2 and 3 can be replicated with a sample of practitioners instead of a student sample. It focuses on the differences between the public and private sector at two levels: at the individual level and at the contextual or situational level. At the individual level, we test if public sector negotiators would behave more cooperatively compared to their private sector counterparts. At the contextual level, we tested whether the level of discretion would impact the negotiation outcomes. The use of student samples has been critiqued because it is claimed by some that student samples are not representative for a specific target population such as for example public sector managers (Benz & Meier, 2008; Sears, 1986; Falk & Heckman, 2009). As a consequence, many studies cannot be replicated in a population of interest. To test if the findings from Chapters 2 and 3 hold, we replicate the experiment by using a mobile laboratory with a small sample of practitioners from the public and private sector.

The findings of this replication study show that, like in the student-based experiment from Chapter 2, individuals with higher levels of PSM contribute more during in a repeated negotiation setting. This means that those negotiators who have higher levels of public service motivation, such as public servants display higher levels of cooperation. Similarly, the findings show that discretion impacts negotiation behavior, just like in the experiment in Chapter 3. This is especially the case when negotiators experience little discretion. Again, no differences were found between public and private sector employees.

Another interesting finding is that the behavior of students and practitioners is very similar in both experiments.

Conclusions

The main research question of this dissertation is: *What are the differences between public and private sector negotiations in terms of sector context, negotiation behavior and negotiation outcomes?* There are three answers to this question.

Firstly, the differences between public and private sector employees such as public service motivation causes variations in negotiation process and outcomes. Those oriented towards the public sector tend to display more cooperative behavior in negotiations. Secondly, differences between the contexts of the public and private sector such as the need for

accountability and levels of discretion cause variations in negotiation behavior and outcomes. Thirdly, the individual differences between public and private sector-oriented individuals are dampened when the influence of specific situational and contexts is large. This is for instance the case when negotiators are held accountable or have little negotiation discretion.

NEDERLANDSE SAMENVATTING

Dit proefschrift focust op de vraag: *Wat zijn de verschillen tussen onderhandelingen in de publieke en in de private sector als gekeken wordt naar sectorale context, onderhandelgedrag en onderhandeluitkomsten?*

De wetenschappelijke kennis over onderhandelen komt in grote mate voort uit onderzoeken die zich richten op (commerciële) organisaties in de private sector. Deze onderzoeken focussen bijvoorbeeld op de mate van samenwerking en competitie van individuele onderhandelaars (Brandenburger & Nalebuff, 2011), op de rol die informatie speelt bij besluitvorming (bijvoorbeeld Scholes, Wright, Westhead, Burrows, & Bruining, 2007), maar ook hoe onderhandelingen gebruikt kunnen worden als middel voor het oplossen van gezamenlijke problemen (Aarikka-Stenroos & Jaakkola, 2012; Graham, 1986). Veel minder wetenschappelijke aandacht is er voor onderhandelingen die zich afspelen binnen of vanuit het perspectief van de publieke sector.

Dat de onderhandel literatuur geen onderscheid maakt naar de publieke en private sector is merkwaardig. Verschillende bestuurskundige inzichten tonen aan dat de publieke en private sector verschillen in organisatiecontext en op individueel niveau (Rainey, 2003; Rainey and Bozeman, 2000; Antonsen & Jorgensen, 1997). Publieke en private organisaties hebben verschillende waarden en streven over het algemeen verschillende doelen na. Waar private organisaties zich richten op winstgevendheid en continu.teit, streven publieke organisaties collectieve en maatschappelijke doelstellingen na (Rainey, 2009).

Op het niveau van de individuele medewerker zijn eveneens verschillen geobserveerd tussen de publieke en de private sector. Vergeleken met medewerkers uit de publieke sector maken medewerkers uit de private sector, een andere prioritering van waarden die centraal moeten staan binnen hun werkzaamheden (Van der Wal, de Graaf & Lasthuijzen, 2008). Daarnaast is bekend van medewerkers uit de publieke sector dat zij bijzonder gemotiveerd zijn om werkzaamheden uit te voeren die een bijdrage leveren aan het maatschappelijk belang (Vandenabeele, 2008; Perry, 2000). Een set van motivaties die bekend staat als *Public Service Motivation* (PSM). Deze motivatie leidt tot verschillend gedrag in situaties die verder gelijk zijn. Alhoewel onderhandelingen in de publieke sector dus veelvuldig voorkomen, en tot allerlei bindende beslissingen leiden, zorgen de eerdergenoemde inzichten dat de bestaande kennis over onderhandelingen niet goed toepasbaar is op de publieke sector.

In de publieke sector onderhandelen EU-lidstaten om tot overeenkomsten te komen bij Europese integratie. Daarnaast onderhandelen bijvoorbeeld ministeries en agentschappen met universiteiten en de nationale spoorbedrijven om afspraken te maken over budgetten en prestaties. Als gevolg van ontwikkelingen in de publieke sector die beter bekend staan als *New Public Management,* zijn er steeds meer onderhandelingen tussen organisaties die gaan over bijvoorbeeld contracten en prestaties (Hood, 1991). Omdat deze onderhandelingen veelal publieke middelen betreffen, kan ook gesteld worden dat deze onderhandelingen in

toenemende mate belangrijk zijn, temeer omdat de uitkomsten van deze onderhandelingen vaak tastbaar zijn voor burgers. Vertrekkend vanuit de gedachte dat onderhandelingen van toenemend belang zijn binnen de private en publieke sector, en vanuit het idee dat er belangrijke verschillen zijn tussen de publieke en private sector als gekeken wordt naar de context en het individu, verwacht ik dat er verschillen zijn tussen onderhandelingen die in de publieke – en onderhandelingen die in de private sector worden uitgevoerd.

Hoofdstuk 2 toetst of en de mate waarin individuen met veel PSM zich coöperatiever gedragen in onderhandelingen. PSM meet de set van waarden en attitudes die voorbij het individuele en organisatorische belang gaan, maar die juist gaan over het bijdragen aan maatschappelijke doelen (Vandenabeele, 2008; Perry, 2000; Perry & Hondeghem, 2008). Onderzoek heeft bijvoorbeeld aangetoond dat individuen met veel PSM eerder geneigd zijn om te klokkenluiden in het geval van misstanden (Brewer & Selden, 1998). Klokkenluiden kan gezien worden als positief op maatschappelijk niveau, maar heeft vaak sterke nadelige gevolgen voor de klokkenluider zelf. Individuen met veel (hoog) PSM worden veelal aangetroffen bij publieke organisaties terwijl individuen met een relatief later PSM vaker in de private sector werkzaam zijn (Delfgaauw & Dur, 2010). Gegeven de hogere PSM van individuen die werkzaam zijn in de publieke sector, verwachten we ook dat zij zich coöperatiever opstellen in herhaalde onderhandelingen. We verwachten eveneens dat zij dit onvoorwaardelijk doen, waarbij dus niet het PSM van de tegenstander dan wel de winsten en verliezen van de onderhandeling een rol zullen spelen. Om de verwachtingen te toetsen is aan de deelnemers gevraagd om tegen elkaar te onderhandelen. Deze herhaalde onderhandeling vond plaats in een computerlaboratorium waarbij de deelnemers elkaar niet konden zien en een zogenaamd *public goods game* speelden. De bevindingen laten zien dat individuen met een hoger PSM zich inderdaad coöperatiever opstellen door hogere bijdragen te doen aan een gezamenlijk project. Een tweede bevinding is dat de mate waarin de onderhandelaars coöperatief handelden niet afhankelijk was van het PSM van hun tegenstander in ons experiment. Met andere woorden, de mate van coöperatie is niet conditioneel. De bevindingen in dit hoofdstuk laten zien dat individuen met meer PSM, zoals medewerkers uit de publieke sector zich coöperatievere gedragen dan individuen met minder PSM.

In hoofdstuk 3 toetsen we of de onderhandelruimte (de hoeveelheid discretie) van invloed is op de onderhandeluitkomsten. Daarnaast toetsen we of de veronderstelde relatie tussen onderhandelruimte en onderhandeluitkomsten verschillend is voor individuen met hoog en individuen met laag PSM. Dit is gebaseerd op twee verschillende theoretische perspectieven. Het eerste perspectief is gebaseerd op speltheorie. De verwachting is dat een verandering van (discretie) de onderhandeluitkomst niet zal beïnvloeden omdat meer onderhandelruimte slechts meer irrelevante alternatieven toevoegt voor de onderhandelaars (Nash 1950; Kalai & Smorodinsky, 1975). Het tweede perspectief is gebaseerd op managementliteratuur. Hier leidt het geven van meer discretie aan medewerkers tot betere prestaties, meer tevredenheid met hun werk en tot een verhoogde werkmotivatie (Gellatly & Irving, 2001; Shin & Konrad,

2014). Daar komt bij dat in de publieke sector, het idee van discretie verbonden wordt met de effectiviteit van beleid, zoals dat uitgevoerd wordt door zogenaamde *street-level professionals* zoals leerkrachten en politieagenten (Lipsky, 1980). Het idee is dat deze professionals hun discretie gebruiken om beleid uit te voeren naar eigen inzicht, en toegespitst op specifieke situaties (Tummers and Bekkers 2014; Tummers, Steijn & Bekkers 2012). Op basis hiervan is het mogelijk dat discretie een andere rol heeft voor diegenen werkzaam in de publieke sector (Van Wart, 2003). In onderhandelingen is bekend dat discretie vooral de manier waarop onderhandelaars macht ervaren beïnvloedt (Kim & Fragale, 2005; Babcock, Loewenstein, & Wang, 1995). Gezien deze verschillende en ook tegenstrijdige verwachtingen is de onderzoekvraag in dit hoofdstuk: *Veroorzaken variaties in onderhandelruimte verschillende uitkomsten voor medewerkers uit de publieke versus medewerkers uit de private sector?* We geven antwoord op deze vraag door gebruik te maken van een laboratoriumexperiment, waarin onderhandelaars aan drie verschillende niveaus van discretie worden blootgesteld. De onderhandelaars moeten met elkaar een overeenkomst bereiken in een variabele som spel waarbij ze weinig, middel en veel discretie hebben. De bevindingen laten zien dat discretie inderdaad de onderhandeluitkomsten beïnvloedt. Met name de onderhandelaars die weinig discretie hadden, maakten steeds een grotere aanspraak op hetgeen waarover onderhandeld werd (surplus). Deze bevinding suggereert, in lijn met managementliteratuur, dat discretie inderdaad van invloed is bij het bereiken van een onderhandelovereenkomst. In tegenstelling tot wat er op de theorie verwacht zou worden, is er geen verschil tussen hoog- en laag PSM-individuen bij het bereiken van een overeenkomst als de discretie verschilt.

In het vierde hoofdstuk ligt de focus op publieke verantwoording, een belangrijk democratisch mechanisme in de publieke sector (Bovens 2005, Bovens 2006; Bovens, Goodin & Schillemans, 2014). Het doel van deze studie is om te toetsen of het afleggen van publieke verantwoording van invloed is op onderhandelprestaties bij het vormen van coalities.

Publieke verantwoording wordt vaak gezien als hoeksteen van moderne democratieën en wordt met name door medewerkers uit de publieke sector als erg belangrijk getypeerd (Van der Wal, De Graaf, & Lasthuizen, 2008). Het afleggen van verantwoording zou leiden tot betere prestaties, minder corruptie en meer integriteit (Bovens, Schillemans, and 't Hart 2008). Uit onderhandel literatuur is echter bekend dat het afleggen van verantwoording door onderhandelaars ertoe kan leiden dat zij minder bereid zijn om concessies te doen (Ben-Yoav and Pruitt 1984). Ook gedragen onderhandelaars in teams zich veel competitiever als ze over deze onderhandelingen verantwoording af moeten dragen (O'Connor 1997). Minder bekend is hoe het afleggen van verantwoording van invloed is op de vorming van coalities door middel van onderhandelingen. *De onderzoeksvraag in dit hoofdstuk is: leidt publieke verantwoording tot verschillen in soorten gevormede coalities en tot lagere onderhandelprestaties in coalitie-onderhandelingen?*

Om deze vraag te beantwoorden maken we gebruik van een *face-to-face* onderhandelingssituatie. Aan de onderhandelaars wordt gevraagd om een coalitie te vormen

waarbij er twee experimentele condities zijn. In de experimentele conditie wordt aan de onderhandelaars gevraagd om verantwoording af te leggen aan een persoonlijk 'forum' over hun prestaties. In de controleconditie legden de onderhandelaars geen verantwoording af over hun prestaties. De resultaten uit deze studie laten zien dat de onderhandelprestaties sterk afnemen als er verantwoording afgelegd moet worden. Daarnaast leidt het afleggen van verantwoording ertoe dat er minder medeonderhandelaars geïncludeerd worden in de uiteindelijke coalitie en dat de kans dat er een coalitie wordt gevormd afneemt. Deze bevindingen zijn interessant omdat het afleggen van verantwoording over het algemeen geassocieerd wordt met een toename van prestaties (Bovens, Schillemans, and 't Hart 2008). In de context van coalitieonderhandelingen lijkt dit mechanisme niet op te gaan. De bevinding sluit aan bij bestaande kennis over variabele-som-onderhandelingen in teams maar is tot op heden nog niet toegepast op onderhandelsituaties met coalities als uitkomst.

In hoofdstuk 5 wordt getoetst of de bevindingen over het afleggen van verantwoording uit hoofdstuk 4 verschillen voor publieke- en private onderhandelaars. Het vormen van coalities is een manier om tot gewenste uitkomsten te komen in zowel de publieke en private sector, bijvoorbeeld in netwerken en publiek-private-samenwerking (Klijn & Koppenjan, 2000). Daarnaast is de roep om het afleggen van verantwoording toegenomen in beide sectoren (Power, 1994). Kijkend naar de verschillen tussen medewerkers in de publieke en de private sector valt op dat het afleggen van verantwoording belangrijk gevonden wordt in beide sectoren, waarbij medewerkers uit de publieke sector meer belang hechten aan het principe van verantwoording afleggen (Van der Wal, de Graaf & Lasthuijzen, 2008). Om deze reden zou het verband dat we vaststellen in hoofdstuk 4 sterker kunnen zijn voor individuen met hoge PSM, zoals medewerkers uit de publieke sector. Om deze reden is de hoofdvraag van deze studie: *Zijn reacties op het afleggen van verantwoording verschillend voor publieke en private onderhandelaars?* Om deze vraag te beantwoorden maken we op basis van PSM onderscheid tussen onderhandelaars die georiënteerd zijn op de publieke sector en onderhandelaars die georiënteerd zijn op de private sector. Op exact dezelfde wijze als in de studie in hoofdstuk 4 worden de publiek- en privaat georiënteerde onderhandelaars aselect toegewezen aan een van de experimentele groepen. In de experimentele groep werd aan de onderhandelaars gevraagd om verantwoording af te leggen aan een persoonlijk forum, terwijl in de controlegroep het afleggen van deze verantwoording niet gevraagd werd. De onderhandelsituatie was gelijk aan die in hoofdstuk 4, waarbij de onderhandelaars coalities vormden tijdens het experiment en elkaar daarbij ook konden zien.

De resultaten van deze studie laten opnieuw zien dat het afleggen van verantwoording leidt tot verminderde prestaties bij het onderhandelen over coalities. Daarnaast lukte het de onderhandelaars die verantwoording af moesten leggen minder vaak om tot een overeenkomst te komen en bevatten de coalities ook minder medeonderhandelaars. Tegen de verwachtingen in is het effect van het afleggen van verantwoording over de

onderhandelingen niet verschillend voor onderhandelaars die georiënteerde zijn op de publieke sector en diegenen met een oriëntatie op de private sector.

De doelstelling van hoofdstuk 6 is om te toetsen in welke mate de bevindingen uit hoofdstuk 2 en 3 gerepliceerd kunnen worden met een steekproef van medewerkers uit de publieke en private sector. Op het niveau van de individuele onderhandelaar wordt getoetst of onderhandelaars uit de publieke sector zich coöperatiever gedragen vergeleken met onderhandelaars uit de private sector. Op het niveau van de context waarin de onderhandelingen plaatsvinden, wordt getoetst of de hoeveelheid onderhandelruimte (discretie) van invloed is op de onderhandeluitkomsten. Het gebruik van studenten als deelnemers in experimenten wordt regelmatig bekritiseerd (Benz & Meier, 2008; Sears, 1986). Een van de punten die veelal aangehaald wordt is dat studenten niet representatief zijn voor de populatie waarin onderzoekers geïnteresseerd zijn, bijvoorbeeld publieke managers (Falk & Heckman, 2009). Als gevolg hiervan is het soms moeilijk om de resultaten op basis van experimenten met studenten als deelnemers te generaliseren naar de doelgroep van interesse. Om te toetsen of de bevindingen uit hoofdstuk 2 en 3 gerepliceerd kunnen worden met medewerkers uit de publieke sector en medewerkers uit de private sector, herhalen we de experimenten uit hoofdstuk 2 en 3 met een mobiel laboratorium.

De bevindingen van deze replicatie laten zien dat individuen die veel PSM hebben zich ook coöperatief gedragen door hogere bijdragen te doen tijdens een herhaalde onderhandelingssituatie. Dit houdt in dat diegenen met gemiddeld veel PSM, zoals ambtenaren ook meer coöperatie laten zien in onderhandelingen. Deze bevinding is gelijk aan die in hoofdstuk 2, waarin studenten als deelnemers zijn gebruikt. Net als in hoofdstuk 3, laten de bevindingen van deze replicatie zien dat onderhandelruimte een sterke invloed heeft op de onderhandelresultaten, in het bijzonder als onderhandelaars weinig onderhandelruimte hebben. In deze replicatie gedragen publieke en private medewerkers zich op gelijke wijze als het gaat om de mate waarin onderhandelruimte de resultaten beïnvloedt. Naast de inhoudelijke bevindingen over onderhandelingen, laat deze replicatie zien dat er weinig verschil zit in de manier waarop studenten en medewerkers uit de praktijk zich gedragen in onderhandelingssituaties. Dit suggereert dat studenten wel degelijk een goed startpunt kunnen zijn voor het onderzoeken van onderhandelgedrag van medewerkers.

Conclusies

De centrale onderzoeksvraag van dit proefschrift is: *Wat zijn de verschillen tussen onderhandelingen in de publieke- en in de private sector als gekeken wordt naar sectorale context, onderhandelgedrag en onderhandeluitkomsten?* Er zijn drie antwoorden te geven op deze vraag.

Ten eerste zijn er individuele verschillen tussen individuen die georiënteerd zijn op de publieke sector en individuen die georiënteerd zijn op de private sector, zoals bijvoorbeeld PSM, die een variatie veroorzaken in onderhandel processen en onderhandeluitkomsten.

Individuen met een oriëntatie op de publieke sector gedragen zich coöperatiever in onderhandelingen.

Ten tweede veroorzaken verschillen in de context van de publieke en private sector, zoals de noodzaak tot het afleggen van verantwoording en de hoeveelheid onderhandelruimte of discretie eveneens variaties in onderhandelgedrag en onderhandeluitkomsten.

Ten derde worden de individuele verschillen tussen de publieke en private sector gedempt als de situationele en contextuele invloed groot is. Dit is bijvoorbeeld het geval als onderhandelaars verantwoording af moeten leggen over hun onderhandelresultaat of als ze weinig onderhandelruimte hebben.

ACKNOWLEDGEMENTS

During my bachelors, I took an elective called 'principles of negotiation' at the Rotterdam School of Management. I became interested in how people make decisions, in how and why they arrive at agreements and how this works when the issues on the table are complicated. This 'obsession' has resulted in a bachelor thesis, a master thesis and now a dissertation on negotiations. Yes, it is finally there! This dissertation would not have existed without the support and help from supervisors, colleagues, family and friends.

I would first like to thank my supervisors Sandra van Thiel, Ad van Deemen and Etienne Rouwette. I could not have wished for a better team of supervisors. Sandra, thank you for giving me the opportunity to do a PhD with you. You were always open to discussing ideas, interesting research of others within and outside the realm of public administration and showing me how to navigate academia. Up until the very last phase you pushed me to 'Write more! You have to write more' and not to assume that any reader will just understand my 'staccato' sentences. You must have had your doubts at times when I wanted to do yet another side research project but you were always interested and supportive. I also really appreciate that you took an interest in my personal well-being, especially at the start of the project. I recall many funny moments such as the interesting people that tend to talk to you on the train and that time you literally ran me over with your bicycle. I still work under the assumption that this was not on purpose.

Ad, I admire that you are fascinated by all kinds of (collective) decision problems and are able to speak in words and in more abstract formulae. From the very start you had the patience to explain how core functions work and why the dean of education and the dean of research are in a never-ending struggle – game theoretically at least. You contributed a lot by bringing in ideas, and being critical of my writings while remaining supportive. You also encouraged me to go ahead and do lab research instead of what you call the 'real life soap' out there. I also like that we could discuss many topics such as holidays, sailing and politics – but mainly decision problems – over a drink or dinner.

Etienne, there were many times you said that you were only involved from the side-line in our project. This is however not how I experienced your involvement. At key moments you were present and suggested alternative paths or raised your objections. You also sat with me discussing the many-many points the reviewers of one of the papers raised and helped me to develop a proper response. Your 'outside' view has helped me more than you probably realize.

I would like to thank the members of the reading committee, Agnes Akkerman, Gregg van Ryzin, Steven Van de Walle, Arjen van Witteloostuijn and Lars Tummers, for their time and effort they invested in reading and assessing the manuscript of this dissertation.

I have many good memories of my Nijmegen colleagues. Peter, I recall the fun we had in teaching the new course. Marlies, your enthusiasm is contagious. Pieter, we met in the train more often than in TvA somehow. Marieke, at one point it just became hilarious how we autonomously and simultaneously went for coffee or tea at Friday afternoons. Jan-Kees, I really enjoyed our talks. Alex, thank you for giving crisp answers when I threw some statistical problems on your desk. Ron, thank you for helping with all kinds of technical issues and for managing the labs. Amanda, Evelien and Karin for doing the important work behind the scenes.

Sjors, Bart-Jaap, Roderick and Bart, I really appreciate our different views and the resulting discussions in our room, surrounded by our self-made paintings. While the building was grey and dull, our talks were never. There are many (former) PhD candidates I would like to thank: Joost, Nora, Lianne, Annelies, Daniel, Gaard, Rutger, Fahad. Besides having a lot of fun, I have learned something from each of you, which has definitely made its way into this dissertation.

I would also like to thank some of my 'new' colleagues in Utrecht. Lars and Stephan for taking the gamble at the time and having Ulrike and me join in on your research projects. These projects confirmed for me that pursuing a PhD could be actually be a lot of fun. Lars, you make it look very easy and that it is possible to have fun while doing it. Stephan, I am looking forward to many more and very cool projects together. Mirko and Albert, for welcoming me in Utrecht. Thank you, Sebastiaan for sharing your enthusiasm and ideas about teaching but also being open to mine and letting me develop a style of my own. I am grateful for my roomies Carina, Jelena, Monique and Silvia for making me feel as if I had always worked at USG.

I would also like to thank the 'ResMaatjes'. Ulrike, Marlot and Minou. We started our masters at the same time, and now we will finish our PhDs at roughly the same time. Although our projects are so very different and it becomes increasingly difficult to pick a date for dinner because Sydney is really far away, our dinners and drinks have helped me greatly.

Special thanks go to my two paranymphs: Elena and Bas. Elena, your optimism is contagious and I really started missing our lunch walks and talks now that you are in The Hague and I am in Utrecht. Bas, I think we know each other for more than a decade by now and no matter the occasion, from touring Europe on a motorbike to a simple dinner, it is always simple fun.

Dear George and Annette, from the moment we met for the first time, you have been interested in me and my research, which is more exceptional than you might know. Renske, some years ago you were the first (in line!) to defend your dissertation. I am happy to be the next, and you are more than welcome to claim that front row seat. Alex, your humor and urge to follow an entirely different path is inspiring!

Pap, Mam, dank jullie voor de onvoorwaardelijke steun in welk project ik ook onderneem. Tot op de dag van vandaag ben ik er nog niet helemaal gewend dat we deze dag zonder mama beleven. Ze zou het geweldig gevonden hebben (met name het feest). Mark, Desiree, Ken, Damy en Ramona, we hebben compleet verschillende levens, doelen en ideeën. Waarschijnlijk begrepen jullie niet altijd wat ik precies deed of waarom het doen van promotieonderzoek interessant zou kunnen zijn. Dit boek is het tastbare resultaat van het werk van de afgelopen jaren.

Dear Lotte, lieve Lot, I really love how we can be so similar in our goals and preferences but are completely opposite in how to achieve them. You must have felt lonely at times when I was physically present and mentally absent. Thinking about research related stuff over dinner – or why rocks are always ordered (top to bottom) from large to small. At the start of my PhD, you sometimes wondered if I could not tell you more about how my day was. Sometimes, there just was very little to tell; working hours at end on a graph just isn't very inspiring to talk about over dinner. Since you have started your Triple-M RCT, you recognize that some days are not very eventful but the research itself can be so interesting. Despite that some of your challenges are very different to mine, I like that we understand each other better every day. I truly hope we will 'sail' together for many more miles to unknown distant shores.

CURRICULUM VITAE

Robin Bouwman was born in Purmerend (the Netherlands) on August 7th, 1985. In Rotterdam, he studied public administration at the Erasmus University where he obtained his bachelor's degree in 2011. He received his masters' degree in in 2013 for the two-year master track: research in public administration and organizational science at Utrecht University after writing a master thesis that focused on the negotiation differences between public and private sector actors in public tendering processes. Between October 2013 and November 2017, he worked as a PhD candidate at the department of public administration at the Radboud University on a NWO-funded PhD project (NWO Research Talent Grant 406-13-021). During this period, he worked as an editorial assistant for International Journal of Public Sector Management. During this period, he participated in the NIG training program and he took elective courses on strategic decision making and statistical hierarchical models. Currently, he works as an assistant professor at the Utrecht School of Governance.